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I

THE SELECTIVE INFLUENCE OF THE COLLEGE

The influence of educational systems as selective agencies is seldom realized. Graduation from a grammar school means not only that one has received a certain amount of training, but also that one is one out of four of those who were seven years before in the second grade. Graduation from a high school means not only so much training in science, languages, mathematics, and the rest, but also that one is one out of twenty-five of those who were eleven years before in the second grade of the system. So rigorous is the selection even in the most favorable circumstances in such cities as Cambridge, Chicago, Denver, Kansas City, Los Angeles, Malden, Minneapolis and the like. Graduation from college means not only that certain intellectual and social influences have operated, but also that the graduate is one in hundreds of those who were in the second grade of schools fifteen years before, one in five or ten perhaps of those who graduated from the high school. Nor does selection cease at the door of the college. "To graduate from college" is not synonymous with "to go to college."

The importance of this process of natural and artificial selection is manifold. All arguments which rest upon a comparison of those who have had a given school training with those who have not are fallacious, in so far as they neglect the fact that having had the training means also having been the kind of an individual who was willing and able to get it. Being a graduate of a high school means, for instance, that you were not one of the ninety-six per cent. who were unable to satisfy

your teachers, or who lacked the ambition to try, or who chose the common path of money-getting, or whom ill health or parental neglect or poverty compelled to miss educational advantages. It seems to some likely to mean in the future that in three cases out of four you are a girl!

Any curriculum the efficiency of which depends upon its approximate completion is necessarily impracticable and unwise if, as in the high school, less than one-third of the students who begin the curriculum will complete it. The absurdity of planning the elementary-school course as a preparation for the secondary school becomes obvious the moment we consider that even under favorable conditions hardly one out of five of even those who reach the fourth grade will ever go to the high school for even a single year.

The amount and direction of the selection in colleges, while not of so great public concern as in the case of the common schools, is of enough moment to demand serious study, especially since common administrative practice neglects it possibly even more than it does the similar selection in the lower schools.

I shall give facts concerning the amount of the elimination and its points of incidence in thirty-four colleges, and concerning the variations among fourteen of these institutions, with respect to the length of time an entering student is likely to stay in them. The data allow certain interesting hypotheses concerning the relative importance of intellectual inability, sloth, distaste, and poverty as causes for the elimination of students from college. These will, however, be only mentioned, the qualitative aspects of the selection being reserved for a later report.

The facts to be reported are of two sorts. First we may compare the size of the freshman class in, say, 1900, with that of the sophomore class in 1901, that of the junior class in 1902, and that of the senior class in 1903. This comparison does not truly represent the facts for any particular college, because of the entrance on advanced standing of students from other colleges, the transfer of students to other colleges, the completion of the course in a year more or less than the usual four years, the repetition of single years by students who do not

complete the course, the transfer to and from the group "special students," and absence from college for a year or more followed by return and completion of the course. It does truly represent the facts for the group of colleges as a whole except in the one particular that these institutions, representing as they do, the better sixth, or perhaps eighth, of the degree-granting colleges, are on the whole more likely to receive additions on advanced standing than to lose students to other colleges by transfer. The figures by this method of comparison will then show probably less elimination than actually occurs in these thirty-four colleges.

In the second method of comparison the actual careers of the members of a class who enter in, say, 1900-01, are followed in the catalogs. We get thus for John Smith a record of, "entered as a freshman in 1900-01, was a sophomore in 1901-02, was a sophomore again in 1902-03, is not in the catalog of 1903-04 in any class." Subject to the errors of the catalogs themselves and of searching and copying, this method gives the life-history of any freshman in the college he enters. Of course this method does not give the tendency of an individual to stay *in college,* but only *in the particular college which he enters.* Transfers to other colleges appear as total eliminations. The method does have the advantages of telling something about the particular hold a college maintains on its own entering classes, and of checking the results from the former method of comparison.

We may call these two methods:

(1) The comparison of class populations, and

(2) The comparison of class permanences.

The colleges studied by method (1) are:

Adelbert (Western Reserve University)	Columbia	University of California
Allegheny	Dartmouth	University of Colorado
Amherst	De Pauw	University of Illinois
Beloit	Hamilton	University of Iowa
Boston University	Harvard	University of Minnesota
Bowdoin	Haverford	University of Mississippi
Brown	Hobart	University of Tennessee
College for Women (Western Reserve University)	Mt. Holyoke	University of Wisconsin
	Princeton	Washington University
	Smith	Wellesley
Cornell	Tufts	Wesleyan
	Union	Yale

The colleges studied by method (2) are:

Amherst	Hobart	University of Wisconsin
Beloit	Princeton	Vassar
Bowdoin	University of California	Wesleyan
Columbia	University of Colorado	Yale
Harvard	University of Tennessee	

TABLE I—CLASS POPULATIONS OF AMERICAN COLLEGES

							Reliability of		
	2-1	3-1	4-1	3-2	4-2	4-3	2-1	3-1	4-1
University of Tennessee	64	36	29	56	45	81	8.4	10.5	10.7
University of Mississippi	74	53	35	72	47	66	13.5	5.5	12.4
Hobart	65	46	36	70	55	79	7.5	8.5	10.0
University of Colorado	58	46	45	79	77	97	8.1	7.0	8.1
Allegheny	61	31	46	51	75	147	8.4	5.4	8.1
Union	67	56	48	84	71	86	10.0 (app.)	10.0 (app.)	10.0 (app.)
University of Iowa	56	43	49	77	88	114	8.0 (app.)	8.0 (app.)	8.0 (app.)
University of Minnesota	66	56	50	85	76	89	8.0	8.0	7.0
De Pauw	66	49	57	74	86	117	8.6	15.0	22.0
Beloit	83	65	59	78	72	91	4.0	4.6	3.4
Adelbert (Western Reserve)	72	64	60	89	83	94	3.6	7.8	6.4
Brown	74	60	61	81	83	102	1.5	1.5	11.4
Tufts	71	67	61	94	86	91	3.5	5.8	2.7
Wesleyan	81	69	66	85	81	96	4.3	6.4	3.6
Vassar	76	64	67	84	88	104	4.2	3.5	3.9
Wellesley	79	66	67	84	85	101	5.1	4.2	2.0
Dartmouth	91	72	69	79	76	96	5.0	5.8	5.8
Mt. Holyoke	91	79	70	87	77	89	10.8	12.0	8.2
University	74	67	71	91	96	106	12.0 (app.)	12.0 (app.)	12.0 (app.)
Hamilton	84	76	72	90	86	95	4.2	5.0	0.9
Amherst	89	75	73	85	82	97	3.0	2.9	2.8
University of Illinois	80	79	74	99	92	93	5.9	2.9	3.6
Columbia	82	83	74	102	91	89	0.0	8.5	11.0
Cornell	72	62	75	87	105	121	3.6	4.2	1.5
Smith	85	72	76	85	89	106	3.5	3.9	3.5
Harvard	108	82	77	76	71	94	0.0	1.2	3.9
College for Women (Western Reserve)	84	76	78	90	91	103	2.0	3.6	9.2
Princeton	95	88	82	93	86	93	2.7	3.9	2.7
Haverford	82	69	83	84	100	120	4.4	1.5	9.3
Boston University	81	78	84	96	104	108	4.6	6.6	3.1
University of Wisconsin	74	78	84	105	114	108	1.2	8.5	4.3
Yale	90	85	90	94	100	106	3.2	4.4	2.7
University of California	92	105	91	113	98	87	2.6	12.0	9.2
Bowdoin	98	97	93	99	94	95	3.3	2.6	3.3
Range	56-108	31-105	29-93	51-113	45-114	66-147			
Limits including 50 per ct.	71-85	56-78	56.5-77	79-93	76-93	91-106			
Median (below which are 50 per ct.)	79.5	68	69.5	85	86	96			
Reliability of median	3.0	4.7	4.3	3.0	3.7	3.2			

EXPLANATION OF TABLE I

In the column headed 2-1 is given for each college the per cent. that the number of students in the sophomore class is of that in the freshman class of the year before. In the column headed 3-1 is given the per cent.

that the number of students in the junior class is of that in the freshman class of two years before. In the column headed 4-1 is given the per cent. that the number of students in the senior class is of the freshman class of three years before. The columns headed 3-2, 4-2, and 4-3 give similarly the percentages of junior on sophomore of one year before, of senior on sophomore of two years before, and of senior on junior of one year before.

The colleges are arranged in the order of the percentages of senior on freshman of three years before (column 4-1).

The reliabilities of the percentages of sophomore, junior, and senior on the freshman population of one, two, and three years before are given in the form of figures, the meaning of which is in each case that the chances are less than one out of ten that the true percentage would vary from that given by more than the reliability figure given. For instance, the record of Tennessee should be read as follows: The sophomore class is most probably 64 per cent. of the freshman, and there is not one chance in ten that if we had complete records this percentage would rise above 72.4 or fall below 55.6. The junior class is most probably 36 per cent. of the freshman, and there is not one chance in ten that with complete knowledge this would rise above 46.5 or fall below 25.5. The senior class is most probably 29 per cent. of the freshman, and there is not one chance in ten that with complete information this would rise above 39.7 or fall below 18.3.

The great differences in the reliabilities of the different percentages are due to the facts: (1) that for some colleges only two, and for others as many as five, series of four classes were compared, and (2) that the classes vary so in size, and also (3) that the dropping out year by year is far more regular in some colleges than in others.

The figures for the reliabilities of the medians have the same significance,—that there is only one chance out of ten that the median from perfect measures would differ from the obtained median by the amount stated.

The facts are given in detail in Tables I and II, which will repay somewhat careful study by the reader who will figure out from them the answers to the questions which arise in his mind. In brief, we find from the comparison of class populations in Table I that, if the size of the freshman class be taken as 100, the sophomore class of a year later ranges from 56 to 108; half of the classes are below 80; the most frequent sizes are 70-74 and 80-84; 50 per cent. of the classes are between 71 and 85. The junior class of two years later ranges from 30 to 104; half of the classes are below 68; the most frequent sizes are 65-69 and 75-79; 50 per cent. of the classes are between 56 and 78. The senior class of three years later ranges from 29 to 93; half of the classes are below 70; the most frequent sizes are 70-75; 50 per cent. of the classes are between 56.5 and 77.

The most striking facts are the extreme range, the great

differences between institutions with respect to the proportion of students who leave college, and the apparent retention thru senior year of practically all the students who have remained till the junior year. These matters may best be reserved for discussion until the class permanences are compared.

The facts of class permanence emphasize the variability between institutions and the retention thru senior year of students who have remained thru junior year. This retention means often, however, that the student is engaged in professional studies tho registered as a college senior. The facts are given in Table II.

TABLE II—CLASS PERMANENCE OF 14 AMERICAN COLLEGES

	2-1	3-1	4-1
University of Tennessee	47	24	18
University of Colorado	52	34	30
Hobart	66	41	36
University of Wisconsin	73	63	53
Beloit	75	61	56
Columbia	83	72	60
Vassar	74	64	61
Wesleyan	78	67	63
Harvard	95	90	64
University of California	—	—	72
Amherst	94	78	73
Princeton	91	86	80
Bowdoin	95	84	81
Yale	90	84	82
Range	47-95	24-90	18-82
Limits, including 50 per cent	73-91	61-84	53-73
Median	78	67	62
Reliability of Median*	7	6	7

*These figures give the probable divergence of the true from the obtained medians.

EXPLANATION OF TABLE II

Columns 2-1, 3-1, and 4-1 refer to the continuance of entering students for two, three, and four years respectively.

The reliability measures mean, as in Table I, that there is less than one chance in ten that the median obtained from complete knowledge of the group of which these 14 colleges are a random sampling would differ from the median given by more than the amount stated.

Using the facts of class permanence and our general knowledge of the arrangements of American colleges as a guide, we may now draw conclusions from the more elaborate facts of class populations.

It would be unwise to compare individual institutions at all minutely, both because of the many modifying circumstances

of registration systems, and because of the unreliability due to the small number of classes. Such a comparison should be made by the administrative officers of colleges, using for their own college records of six or eight classes, which would give an unreliability of from three to less than one. Comparisons with the medians in Tables I and II would then be extremely significant.

Tho the exact position of any individual college is not determined by this study, the fact of the great variability among colleges is. There can be no doubt that the inclusion of a hundred more colleges would even increase the diversity. There can be no doubt that some colleges are three times as likely as others to keep for four years a student who enters. This variability—found also in the cost per student of the education which the college gives, in the number of instructors per hundred students, in the amount of prescribed course work, in the amount of professional work allowed to count toward the degree, and in almost every feature of college work—shows how variable is the work done by "the college," and how utterly unsettled are the ideas of college officers as to what work it should do. There can also be no doubt that a part of this variability is due not to the wealth or intellect of the entering students but to the attachment the college arouses. The movement of students during their course from small to large colleges, and the influence of geographical location with its related conditions, are also apparent.

The amount of elimination, tho not comparable with that which occurs in city high schools (it is only one-half as great), is sufficient to make the practice of making freshman and sophomore courses introductory rather than general questionable, and to demonstrate that a college degree is a symptom of a certain degree of health, ambition, wealth, and capacity, as well as of training. Putting the facts of both populations and permanences together, we may conclude that the median continuance in *some* college of the classes entering these thirty-four colleges is: to a second year 79 per cent., to a third year 68 per cent., and to a fourth year 66 per cent. The medians for all American colleges with an annual income of $30,000 or over

would probably be lower. The percentages of *all* students continuing are probably slightly higher because students entering the larger colleges are more likely to continue in college.[1]

Withdrawal from a college is most frequent in the first year,[2] and least frequent by far in the third.[3] Using the medians of Tables I and II, we find that for 100 students in an entering class, there are a year later 20 fewer, whereas the decrease from the third to the fourth year will be perhaps 2; of 100 students entering a college 22 will leave it after one year, 11 after the second, and only five after the third. These facts have two practical consequences of some moment. (1) Elimination by incapacity, indolence, and distaste is surely a chief cause of the first year's loss. This elimination is, I believe, more useful to the college than the elimination before admission by entrance examinations. In a later article I shall show that entrance examinations are a grossly inaccurate prophecy of achievements in college and shall show abundant reason for permitting entrance to any student whom the secondary schools recommend, and making his work, year by year, decide whether he shall be allowed to continue. (2) The student within a year of his degree will almost universally give up a year to get it, and is thus penalized one year in the colleges where professional work will not count toward it. He may be given the worth of his time, but it would seem wiser for such colleges so to co-operate with universities in their neighborhood as to leave the student a free choice between a degree with a year's professional work to his credit or a degree with an additional year of academic courses. Thus of our list, Beloit, Tufts, Wesleyan, and Haverford, ought perhaps to obtain for their students the advantages of certain professional or advanced academic courses in Wisconsin, Harvard, Yale, and Pennsylvania respectively.

The feminization of education which is said with much reason to be in prospect for America is not apparent in these

[1] This does not make the percentages of all students much higher than the median percentages for classes, because of a skewness in the distribution of continuance by classes. This cannot be shown in detail here.

[2] Including the interval between the first and the second year.

[3] Including the interval between the third and the fourth year.

records. The facts are not adequate, but, so far as they go, they show no marked difference between the sexes in continuance in college. The class populations of the four colleges for women in our list show medians differing by only +2, +3, and −1 from the medians for the other thirty. (See Table III.) The length of time spent in Vassar in the case of Vassar students is almost at the median of the class permanences for the fourteen college studied, the figures being 74, 64, and 61 for Vassar, and 78, 67, and 62 for the medians of the fourteen. In the case of the Universities of Colorado, Tennessee, and Wisconsin, the proportion of students remaining four years was calculated separately for men and women. In the two former more men stayed; in the latter, more women. The differences thus about counterbalance each other and are slight. (See Table III.) In so far as these three are a random sampling from colleges in general, we have a right to say that the most likely fact is that about 98 per cent. as large a proportion of women as of men stayed four years, and that the chances are nine out of ten that the true ratio is not less than 88, or more than 106.

TABLE III

A—Class Populations of Colleges for Women

	2-1	3-1	4-1
Vassar	76	64	67
Wellesley	79	66	67
Mt. Holyoke	91	79	70
College for Women (Western Reserve)	84	76	78
Medians	81.5	71	68.5
Corresponding medians for colleges for men and women	79.5	68	69.5

B—Proportion Staying Four Years

	Men	Women	Men-Women
University of Colorado	29.2	27.8	1.4
University of Tennessee	17.1	15.2	1.9
University of Wisconsin	47.8	53.7	−5.9

This large dropping out of students from colleges is, of course, regrettable from the general philanthropic point of view, which wishes to secure for all the greatest educational opportunities. But if the practical issue is the direction of a given amount of money and effort in higher education, it may

well be that a process of constant selection is desirable. The important consideration then is not how many leave college, but *who they are*. If the college that loses half its class at the end of the first year loses the less gifted, most idle, and most common half, it need not perhaps feel that it is in need of reform, and may even congratulate itself in comparison with a college which loses only five per cent., but loses these from the most gifted, earnest, and superior men or women.

Such a study of this is only a preface to the main question: the question of what type of man or woman the American college eliminates. Does the lack of money drive pupils from college as it certainly does prevent them from entering? Is the lesson-learner, the student in the narrow sense, the type which the college course most attracts and holds, as it certainly is the type which it most rewards in money and distinction? How often does mere loneliness and lack of appreciation and comfort in perhaps trivial ways lead to withdrawal? What causes the extreme variability amongst colleges in this respect? What sort of college is left and to what sort of college does the student change?

The data for a qualitative study are, however, obtainable only in imperfect form and at great cost of time and labor. The presidents and deans of colleges naturally form opinions unconsciously from the cases to which their attention is called, but these opinions are not quantitatively definite and are no more trustworthy than similar unconscious judgments which impartial and systematic observations have shown to be erroneous. Such, for instance, was the case in the common opinion about the age of graduation from American colleges. I am assured by a college officer in one university that failure to meet the college standard of scholarship is there practically the only cause for withdrawal. This impression may, of course, be correct, but when one finds that half of the students at that college remain only thru the first year or less, one feels insecure in accepting it.

It would be well worth while for college officers to record systematically the cause of leaving college in each case, as some public schools have tried to do. They would be surprised to

find how many cases would have to be recorded as "cause unknown." It is rash to speak *a priori,* but I am convinced that in the case of any fair-sized class in any college many of those who stay profit less than some of those who leave college, and that in a considerable proportion of these cases, say in one out of ten at least, the college officers could have made it possible for the student to stay had they known the facts. The sympathetic insight and efficient management which do thus rescue for higher education the student who deserves it are perhaps the most directly useful qualities of a college officer.

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II

NATURE-STUDY AND RELIGIOUS TRAINING

It is one of the interesting facts of the present time, significant of a profoundly changing sentiment, that those who are most deeply concerned in the moral and religious development of children are seeking new ways and means of instruction thru an enlightened study of science. This tardy heed of the cry raised by Rousseau over a hundred years ago for a return to Nature represents concessions, easily made to-day, that a generation or two since would have been quite impossible. On the one hand, it indicates a better understanding of nature, and, on the other, a more distinct recognition of a spiritual life. It is evident that, on any theory of the universe, a satisfactory scheme of general education must take both these factors into account from this time forth.

For nearly half a century the belief has largely prevailed that science and religion can find no common ground. The necessity of the former to deal with matters of sense, apparently committing it hopelessly to materialism, and the tendency of the latter to deal with things spiritual, with more or less disregard for the testimony of the senses, have created a breach that it has seemed impossible to bridge. But now more data are available, and both sides are able to reflect upon the questions involved with greater calmness and with a clearer understanding.

On the one hand, science now clearly recognizes the existence of a spiritual life. Whether the monistic or dualistic view obtain, the spiritual life, as a scientific phenomenon, remains the fact of supreme importance in experience. Modern psychology, which has for its end the investigation of the spiritual life, is as truly a branch of natural science as is botany or geology. Still further, it is becoming more generally acknowledged that the value of scientific truth is to be estimated,

finally, in accordance with its power to contribute directly to spiritual development and welfare. Much experimentation and investigation must ever be directed to ends of doubtful or unknown value; but the final motive will be positive in its direction toward the upbuilding of spiritual life.

On the other hand, religion is beginning to realize how closely the spiritual life is bound up in the physical constitution of man. In times past, the roots of religion were traced to an instinct implanted from without. But, in reality, religion probably is no more the outgrowth of a superimposed instinct than is one's hearing or eyesight. It is as much the result of our physical development as the gastric juice is. As this idea gains ground, it increases the tendency to make religion a matter more of this world and less of the next one. Science and religion, thus, have been moving along two converging lines which, in our day, have met in a revised idea concerning the function of both, and in a new conception of the spiritual realm.

The history of religious training in its relation to public education, as this is commonly understood, is interesting. In early days, no one thought of separating the one from the other. But, as the material interests of the country developed, calling for a greater emphasis upon those features of school work which were supposed to be most essential in the successful prosecution of worldly affairs, less attention was given in the schools to purely religious training. The gradual drawing away of secular education from religious instruction was perfectly natural. The former always has before it the difficult problem of constant readjustment to ever-changing conditions. The latter, resting mainly upon dogmas, has been more fixed in its character, and the ends which it sought to attain have had the semblance, at least, of being more essential and more permanent. The constant ferment and movement in secular instruction came to be regarded with suspicion, and the unheeding fixedness of ideas in religious teaching became the object of a poorly disguised contempt. Under the mistaken notions which people generally entertain as to the relation of the two branches of instruction, it was inevitable that a com-

plete divorce should be sought for and, finally, should be secured.

It is a weakness on the part of humanity to feel that if a change takes place very slowly, as a matter of course, it must be right. It is, therefore, only beginning to dawn upon us that this breach between two organic parts of our education —the intellectual and the moral—involves an inconsistency which makes the present situation absolutely untenable for both. It is no wonder that a supposed scholarly Oriental with keen wit has thrust the rapier of his criticism into this fundamental weakness of our educational system.[1] He says in China they have Confucianism thru and thru—they are consistent; but in our country we have been careful to legislate our religious instruction away from our secular training, and as a natural result our religion itself has but little to do with our business life. The actual effect of this separation has been to put the burden of moral and religious instruction upon the Church and Sunday school—at least these institutions have felt that they must assume it—and to a corresponding degree the attention of teachers in the common schools has been drawn away from the goal of all true education, namely, the development of moral character.

The possibility of the separation of secular from moral and religious instruction has been due to the antiquated idea that man is a kind of triple being, physical, intellectual, and moral. The day school, taking up the larger part of the week, has been supposed to minister chiefly to the first two, while the moral nature has been made the object of special effort on but one day in seven. In this way the Sunday school has come to stand as the distinct representative of our moral and religious instruction as the common or day school represents more distinctly a training in practical business affairs. The difficulties, therefore, which now confront the Sunday-school teacher who attempts to take up nature-study, and the day-school teacher as well, who attempts to teach morality, arise from several causes. First, from the false conception that it is possible to educate man by piecemeal; second, from the consequent and equally

[1] The *Letters from a Chinese official*: McClure, Phillips & Co., New York.

false notion that it is possible to educate one part of the child-nature at one time and place and another part at a different time and place; and, third, that there is one kind of material that a teacher may use for the development of the intellectual character and another and different kind of material to be used in the development of the moral character. This plan of instruction has been closely consistent with the idea that exists in the minds of most people even to-day, that there are two separate and distinct worlds: the physical, with which the intellectual is closely bound up; and the moral, which seems to exist in a state of semi-independence of its own. The former is held to be of the earth, earthy, and it belongs to time; the latter is thought to be spiritual and subject to a different mode of control. It has been the misfortune of nature-study to be classed among those things which pertain to the physical and intellectual man, and, if not hostile, it has been considered to be at least indifferent to his moral nature. This attitude toward the subject is the result of an education thru dogmas. It is proper, therefore, to consider the problem first from the standpoint of the teacher, rather than from that of the pupils.

So far as the children are concerned, it is not more difficult to introduce nature-study into the Sunday school, than it is to start it in the day school. The children appreciate nature on Sunday as on any other day and they look at it from the same point of view, if they are not molested in their thinking by influences of the usual orthodox character.

It is important in the outset to observe that the task of the present *is not simply to introduce* nature-study into the Sunday school. If that were all, the undertaking would be far simpler than it really is. It must be remembered that a vivid account of nature always has been presented with dramatic clearness as a part of the Sunday-school curriculum. So faithfully have these lessons been taught, that, to thousands of people, it were not more shocking to doubt the common axioms of morality than it is to question any part of the biblical story of nature. Indeed, this narration exists in the minds of the majority of people so completely rounded out as a finished history of nature that it requires unusual hardihood for anyone to countenance

any presentation of nature-study not fully in accord with the ancient and well-told story. In passing it may be remarked that the powerful hold which the biblical narrative has upon most people is due much more to its dramatic literary style than to any appeal that it makes to reason. Realizing the place that the biblical account of nature has in the minds of men, it is no wonder that much valuable time has been occupied with attempts at reconciliation; it has been the fond hope of many good people that, in some way, it could be shown that modern science would finally lend its powerful support to the scriptural record. But, out of patient and careful observation, science has created a conception of the origin, the development, and the destiny of nature, and of man's place in the great plan, that cannot be linked with the primitive conception by even the maddest flight of poetic fancy. It is needless to say that the vital consideration in both the old and the new conceptions of nature is the place that man occupies in the scheme of creation. It is not simply a difference in the observation of facts, it is the widely different interpretation of them that has given rise to controversy. In the early conception, nature was something to which man was super-added. In the newer notion, man is an organic part of the whole. In the former, it is the story of man *and* nature; in the latter it is the story of man *in* nature.

It is interesting to note how thru the centuries man's relationship to other created things has been constantly changing. For untold ages he rested serenely in the belief that the earth was the center of all celestial systems; that man was specially appointed to be the head of created things; that the beasts of the field, the birds of the air, and all creeping things were passed in review before him as lord of creation that they might understand his kingship over them. This idea grew out of the early observations of man and naturally the belief in it became a part of his religion. The slow growth of scientific knowledge, however, has demonstrated that what man once regarded as the most fundamental of all truths now turns out to be one of the greatest of all errors. The anthropocentric conception of creation has been completely supplanted by the biocentric conception. Not *man*, but *life*, of which he forms

but a part, is the culminating height of creation. Just as the Copernican theory changed in men's minds the relations of all the heavenly bodies, so the Darwinian theory has rearranged all the members of the living world in an entirely new perspective.

More than this, we have learned that each created thing has its own inherent value and its own inalienable rights regardless of its relations to man. We have learned, too, that each creature, no matter how lowly it may seem, has a wisdom of its own that is sufficient for itself. Garnered up in the tiny brain of the little mud wasp are the knowledge treasures of millions of years that enable it to maintain itself against the cunning, the rapacity, and the strength of all other hosts with which it lives. The Darwinian theory, which certainly has more points in its favor regarding the history of life than any other, completely demolishes the old picture which was very firmly established in our minds in our early years through the teaching of the Sunday school. It is no wonder the doctrine of evolution has been bitterly opposed. Its basic principles are at once so simple, yet far-reaching, that their appeal to the mind is readily made and their significance is easily understood.

It is against this flinty wall of pious belief that nature-study must hurl itself and upon which it must make some impression if it is to gain a foothold in the Sunday school as a means of moral and religious training. It will take a long time to reach any satisfactory result; for scientific method and scientific knowledge make their way with infinite slowness in the minds of men that once have been saturated with dogmas. There is no evading this issue. The end should be clearly seen from the beginning: to introduce nature-study into the Sunday school, that is, to make it a direct factor in moral and religious training, means to give the child an entirely different point of view from that received by those of us who learned its lessons a quarter of a century ago.

In the face of the certain revolution which must begin the instant true nature-study enters the Sunday school, the question should be fairly considered as to what changes in methods and

results of Sunday-school teaching may be expected. In the first place the old idea must be abandoned that man's nature is hinged in the middle,—one end being moral and the other intellectual,—and that science can minister to the latter, only, and be indifferent, if not hostile, to the former. The development of the highest moral character is the goal of education and all means of human growth must contribute directly to its realization. Nature-study must stand the same high tests in this regard that we are accustomed to apply to the so-called humanities. It is not a mere intellectual diversion, a delightful tonic for the senses, nor is it simply a happy convenience for teaching children the three Rs; nor does it find its highest worth in purely commercial or utilitarian ends. We shall find, ultimately, in the study of nature the deepest roots of the highest moral life.

Judging by the modification that has taken place in our views of conduct and duty within the last quarter of a century, it is easy to believe that the next hundred years of science will see the development of a code of morals of a distinctly higher type than the world has ever known. The great generalization of science upon which our future ethical systems must rest is that nothing happens thru whim or chance; that everything, both in the realm of the physical world and within the field of human action, occurs in a fixed and definite order. The precise description of the relation of observed events which occur in an unvarying succession becomes the statement of a natural law. There are at this time but few of the so-called 'natural laws that have a general recognition. Of these, the law of gravitation is, perhaps, the best example. If a house, being poorly built, begins to lean out of plumb, there is probably not a civilized man in the world who would seek to bring it back to its proper position thru a plea for miraculous or divine intervention. When a brick falls from a housetop no one standing in its descending path has the slightest hesitation as to what he should do. So far, at least, have people been thoroly trained in the principles of science. But, one step farther, and there is considerable confusion. There are, for instance, whole communities which know that the only way

to avoid injury from the falling brick is to dodge it, yet, they do not hesitate to pray for rain, which in the yast analysis is as much a matter of physics as the falling brick. And, when we go beyond this, and seek to refer *human actions and their consequences to natural laws* that are as rigid and as immutable as that which controls the falling brick or the leaning house, there are as yet but very few people who are willing to follow. This simply means that as yet human actions and their consequences have been so little studied thru scientific observation that in most cases no fixed and unvarying succession has been discovered. Even the insight of Professor Huxley apparently failed him at this point. In his Romanes lecture, delivered not long before his death, he said substantially that the principles of evolution which held in the physical world would not apply in ethics; that the "ape and tiger methods" of the brute world utterly failed to account for the development of the ethical system under which the most enlightened society lives. It is not surprising that this view should be held. In the past, man in his conduct has felt himself almost as irresponsible to law as does the senseless, falling stone. It is his latest lesson that he is but beginning to learn, and which it was only possible for him to learn thru a study of nature, that his actions which foot up the sum total of conduct form a definite order which is as fixed as the law of gravitation itself. In the past, that which has stood for morality has been largely the result of imitation and command. We were exhorted to be good like some great hero in the past, or because there was an almighty fiat requiring it. Hence it was that history, not nature, was ransacked for examples that might be held up worthy of emulation; and, hence, it is, also, that the world has had but comparatively few people who represent the high type of morality which in the future will conform to the standards of science. It is said that George Washington was so scrupulously honest in his dealings that the Mt. Vernon brand of flour could pass the West Indies' markets without the customary inspection. In such rectitude, Washington probably did not feel that he was imitating some illustrious example, but rather that he was obeying an inflexible law;

that is, yielding himself to a fixed order, which rigidly determined his relationship to his fellows. To have broken that law, to have interfered with the order, would have been as fatal to his manhood as being struck by a falling brick would have been to his physical person. This law is as much a natural law as that under which the tree grows or the bird flies.

The great and essential difference between the old and the new ideas of morality lies in this. Under the former notion by which men were held to certain lines of conduct by a fiat, usually coupled with the threat of some sort of punishment for disobedience, it was supposed that anyone who made the proper petition might be absolved from the performance of certain duties or exonerated from blame for failing in the performance of others. Under the latter notion, men's relations to each other are fixed and necessary, and all rules of conduct become simply the expression of those relations as they actually exist. This order of things, the statement of which becomes a law of conduct, cannot be evaded by any means or subverted without the absolute destruction of the moral character of the beings concerned. These are the conclusions reached thru a study of nature.

I am well aware that this view presents nature in a cold and unsympathetic light. The human being longs for the sympathy that can and will take into account his special case and will occasionally, it may be, overlook his shortcomings. In denying the possibility of this, science seems to be destroying one of the chief consolations of religion. Mature reflection, however, will show that the consolations of science are to be preferred. It is vastly more conducive to a sound faith to realize that the affairs of men are, or may be, subject to a beneficent and unchanging order than it is to suppose that they are subject to the vacillations of caprice that may yield at any moment to either mundane or celestial influence. Herein lies the tremendous stimulus to the study of nature; the greater the knowledge of the law and the facts, the more secure we become in our possession of the future.

The teachings of modern science by imperceptible degrees have already profoundly modified our attitude towards those

immersed in vice and crime. If the dwellers in the haunts of wickedness had become the plague of society thru deliberate choice, then there would be but one solution for the slum question in our cities, and that would be to plant cannon at the angles and sweep the streets with grapeshot. But as the light of science breaks in, revealing that a state of sin can only arise thru a condition of actual ignorance for which no one person, nor any one generation, is wholly responsible, then dawns for the individual a new era as thru a new birth. The struggles of the race thru its upward gropings, bearing its misfortunes, now falling back, now but holding its own, and, again, advancing with a great stride or, it may be, with painful steps and slow, all arouse one's profoundest sympathies. The spirit of condemnation is quenched; the incoherencies of mankind are but its calls for help that we may render; are but cries for light that we may cause to shine; nature thru its every unfolding mood makes its direct appeal for the earnest enlistment and constant exercise of our good will.

The real reason for "Man's inhumanity to man" in the past is clearly expressed by Browning when Paracelsus says:

> "In my own heart love had not been made wise
> To trace love's faint beginnings in mankind,
> To know even hate is but a mask of love's,
> To see a good in evil, and a hope
> In ill-success; to sympathize, be proud
> Of their half-reasons, faint aspirings, dim
> Struggles for truth, their poorest fallacies,
> Their prejudice and fears and cares and doubts;
> All with a touch of nobleness, despite
> Their error, upward tending altho weak,
> Like plants in mines which never saw the sun,
> But dream of him, and guess where he may be,
> And do their best to climb and get to him."

True nature-study at once controverts the old idea that man in his final interests is at *war* with nature. On the contrary, his every step should be one placing him more nearly in accord with her. We have been deceived by many apparent contradictions. The man who rises in a balloon obeys the law of gravitation as implicitly as he who lowers a bucket into a well.

Each takes advantage of the law in a different way in order to accomplish a different end. The man who with an ox team rips up the tough sod of the primeval prairie may feel as tho he were at war with the earth; but his sole effort is to place himself in line with nature in order to receive what she has to give. The idea that in disease the physician can do nothing except, possibly, to assist nature, is slowly revolutionizing the whole science of medicine to the utter confusion of the ancient ideas of cure solely by drugs.

One cannot be blind to the fact, however, that there is a mighty conflict raging among the things of nature. That life hangs by a slender thread is true; but the instinct of life is so strong that the study of the living thing becomes in the last analysis a study of the means by which it manages to preserve the thread. In the brute world and to too large an extent in the domain of human life, the "ape and tiger methods" prevail. One creature saves itself by that cunning which outwits its fellow; another by flight; another by hiding itself away; and others by boldly fighting for what they want. To the brute, to the short-sighted, to the ignorant, to the entirely unscientific mind these seem to be the methods that must prevail. By these means the current of life has held its way with the majestic movement of the ages. These methods are in strict accord with the natural laws that direct and control brute strength. Under their operation, untold ages ago the lowliest atom of sentient existence began its mysterious career; and since then it has always been a question of life and more abundance of life.

Thruout the countless centuries the "ape and tiger methods" have prevailed. These methods accorded with the highest order of moral life that was known. By and by, with the dawn of reason came the suggestion of something better. Every age of human history has been at least feebly illumined by the soul of someone who proclaimed a higher law. Almost every tribe and every condition of men has had such a one, and these have been the great prophets of the past. Nineteen centuries ago the higher law was so clearly enunciated and so bravely maintained that it transfixed the attention

of the world. "Whosoever will lose his life shall find it." There has never been formulated a higher natural law than this. A natural law is but an expression of the relation of things under which they are known to exist. The highest law but expresses those relations under which there is the highest existence. The "ape and tiger methods" prevailed for a time; but the rock strata of the hills give evidence that the apes and tigers are at last overcome by their own methods. The law of love is an expression of a fixed natural moral order, as the law of gravitation is an expression of a fixed natural physical order. The apes and tigers and all their kin who cannot understand this law, or who will not observe it, must perish as certainly as he who is buried beneath a falling wall. The reason why it has taken nineteen centuries for the great principle expounded by Christ to have any particular influence in the affairs of men is because they have not believed it to be a natural law. They have looked upon it as a whim or as merely the expression of a personal opinion or as a bit of advice, and nobody, necessarily, has any regard for any of these, even tho it should come from the Almighty himself. The final confirmation of the great law of love belongs to science. It comes from and thru a study of nature. Its acceptance is made possible only by man's true place in nature becoming known and understood. What a century under the operation of this law will do for mankind we can scarcely imagine. In a hundred years we shall look back upon the jail, the penitentiary, and the reformatory as now we look back upon the pillory and thumbscrews as instruments of torture. The prisons will be visited as curiosities as we now visit the Tower of London. The new century of science will be the age of the schoolhouse and of education. The strong will help the weak and thus more surely increase their own strength.

In the gradual and continued regeneration and upbuilding of the race the people will always have a religion. It will play an important part in the future, as it has done in the past, but it will not be the religion of our fathers. It must and will develop out of a broader knowledge, and it will conform, more nearly than the old, to changing notions of life and destiny.

The religion that we may look for which will be compatible with the scientific spirit of the times will be capable of changing to suit the growth of new ideas of all kinds. It will not rest upon dogmas that are fixed. Moreover, its tenets will not be forced by such incessant iteration upon the children at an early and impressible age that when they arrive at the years of reason they shall find themselves, as now (if they ever do discover it), the helpless slaves of tradition. It is just as irrational and wrong to seek to instruct in religion by merely unloading upon a child fixed dogmas and sonorous precepts as it is to endeavor to instruct him in science by making him the mouther of high-sounding definitions. Religion, not less than science, in the future, must be amenable to the principles and laws of correct pedagogy.

It follows, therefore, that some of the present efforts to rehabilitate religion, notably that by the mere reintroduction of the Bible into the schools, cannot of themselves accomplish the desired end. So far as the principles of conduct which it expounds are compatible with what a people with growing enlightenment find to be true, the Bible, whether it is put back into the schools or not, will always have its influence. But if it were to be put into the schools and made the only text-book, it never again can play the part in education that it once did when it was supposed to set the bounds to the intellectual and moral growth of the race.

The special plea now made for the use of the Bible in the schools on account of its literary value should be regarded with suspicion. On the part of many, no doubt, it is but a thinly disguised attempt to reincarnate in the schools the traditions and superstitions of the old religion. Literature is a vehicle of belief, and its real worth rests not upon the forms of its phrases but upon the actual truth it embodies. Upon this point there should be no misunderstanding. As a history of the struggles of portions of the race towards higher levels of intelligence and morality, the Bible will always have a distinct value. But biblical students have clearly shown that in its present form it is a bewildering confusion of myth and history. In its myth it represents the

race, ever appealing to the supernatural, and, as being extricated constantly from positions of difficulty by divine and miraculous intervention. These are the features which have received the chief emphasis in biblical instruction in the past. In the light of present thought such teaching is no longer permissible. But when its many stories are disentangled and properly rearranged the Bible presents a most interesting history of the evolution of a portion of the race that struggled from savagery towards civilization, from ignorance towards culture, by the same natural methods that we ourselves employ to-day. This is the aspect of Bible study that will receive most attention in the future, and its testimony will be found to corroborate rather than to refute the doctrine of evolution. We shall find, in all probability, a renewed and more intelligent interest in the biblical narrative. The trials of these early peoples and their appeals for help will still move our sympathies and we shall still celebrate our own triumphs, with theirs, in song. The ears of mankind can never be totally deaf to the warnings of the great prophets, but we shall never feel again that we must adopt their many superstitions as a fundamental part of our religion.

Religion must recognize that the race grows not only intellectually, but morally. Our ideals are far higher now than ever before, and our religion must correspond. In the days of Aladdin and his wonderful lamp the highest service required of the genie was that of building palaces of massy gold, studded with precious stones, and in ministering to the sensuous pleasures of his master. It is true we are not entirely clear of that class to-day; but, if the *highest* type of mankind now owned such a magic lamp, its genie would be given tasks of a different kind. We would send him over to the slums to put a broad and grassy lawn around each dwelling. We would command him to change the dark, reeking, and crime-breeding alleys in the levee into beautiful shaded lanes with singing birds in the tree tops. We would make him put smoke-consumers into every factory. We would ask him to surround and fill every home with sunshine and fresh air; to provide clean, wholesome, unadulterated food

and bodily comforts of all kinds for the unfortunate. We would make him watch our city councils, and stand guard over the legislation of the State to see that the fingers of greed and power close not around the throats of the weak. Thus would the powerful genie of the lamp find himself called upon to-day to minister to mankind in these and a hundred other ways never dreamed of by the ancient story-teller of Arabia.

The religion of a people always enshrines that to which they most sincerely consecrate their lives. The essence of all religions is found in *belief*. The old religion rested upon a belief in a supernatural, of which, according to all the rules of evidence and facts that would be recognized in any human court, we have no knowledge whatever. The new will rest upon a belief in the natural; it will be most concerned about those things of which we have most knowledge; about those things which, by experience, we find have the greatest efficacy in lifting the human race. To the great and so far unknown hereafter it will give but little heed, unless by some new and at present unsuspected method of research it should become actually revealed.

Let no one think that this kind of religion is a chimera. Because it has not the guiding hand of such an influence, science is tossing to-day like a rudderless ship in the open sea. Science has ministered to the material, intellectual, and moral life of a few, but it has only incidentally, nay but accidentally, benefited the great mass of humanity. Bitted and spurred by ruthless greed, it is being constantly driven to selfish ends regardless of human rights and privileges it blindly and mercilessly tramples underfoot.

I recall to mind a beautiful valley—a region of splendid farms. Untarnished sunshine, pure air, clear water from unfailing springs, and a fertile soil were the lavish conditions of happy and peaceful living. To-day it has been invaded by a great corporation that boasts its capital of forty millions. In this garden spot of the earth, where every man in its employ might have had a vine-covered cottage and a garden; where he might have had pure air, sunshine, and water for nothing, this great company, instead, has chosen to house its employes

in crowded tenements, packed together in streets and rows, so that within a year the condition of these people will rival the slums of the Chicago levee. Instead of a religion that wastes its time in meditations on immortality, we must have one that will make the frightful wrong done to the *mortal existence* of these ignorant people its sacred care. Sometimes there is nothing so unscientific as science. It is futile and unscientific to suppose that the building of a thousand libraries can ever put back into the lives of those people what has actually been taken from them by the desolation and "slumming" of their once beautiful valley.

We stand in mute horror before the catastrophe of the Iroquois Theatre fire; but that disaster is repeated over and over again every year in our cities. Unsanitary houses, filthy streets, adulterated food, impure air combine to carry off human beings that are the victims of a neglect as reprehensible as that which attaches to any directly responsible for the Iroquois disaster. That they die one by one and alone instead of suddenly and in a heap does not really lessen the horror. *The conscientious application of half the science we know would save them all.* I believe in the great doctrine of redemption. When imbued with the new religion, every man will become a savior of the weak and the needy. Man will not only become his brother's keeper, he will become in truth his redeemer.

There is one thing more in the old religion that has been considered essential, that in the new will be secondary. It is a belief in God. This proposition, instead of being first, and an assumption, shall be last and subject to the rules of evidence. It will not, as in the past, be thrust upon childhood with an incessant dingdong that admits none of the considerations of reason; that acknowledges no right on the part of the child to form a conclusion from premises of his own. This in the long run will be for the best. There is no more sure way to produce infidels and atheists than to proclaim God from the church steeples and at the same time allow the devil to run at large in the streets below. The surest way to lead the child to a belief in God, if that end

be desirable, is not by giving him the catechism, but by every man, woman, and child of us joining together to promote harmony in living. The best way to prove that God is good is by showing thru actual living that the trend of life is toward better and higher ends. Belief in God, like all other questions, must rest finally upon evidence. If after a lifetime of thoughtful observation and conscientious work one comes to believe that there is a God and that He is good, no one who holds the new religion will quarrel with his faith. That is a matter for himself alone; another cannot give it to him nor can another, then, take it away. It was this new faith bursting forth in the life of the "good gray poet" of nature when he said:

> "O my brave soul!
> O farther, farther sail!
> O daring joy, but safe! Are they not all seas of God?
> O farther, farther, farther sail."

The existence of God and the immortality of the soul are topics which will have a supreme interest in the future as they have had in the past. But it is impossible that belief in these great dogmas should be clothed by the new religion with that importance which was attached to them in the old. In an ethical and religious system which regulated conduct by a scheme of rewards and punishments administered from without, the postulates of God and immortality were indispensable. But, considered apart from the ideas of reward and punishment, it is absolutely incomprehensible that conduct should be affected one way or another by either belief or disbelief in these two ideas—interesting tho they may be. The religion that will be justified by science will be primarily concerned with the spiritual life, here and now; its efficacy cannot be contingent upon any theory as to future existence. The emphasis in the new religion, therefore, will be taken gradually from these two articles of belief and it will be placed more and more strongly upon the inherent quality of human action as it appears in conduct.

If the presentation of nature to the children is to properly and fully contribute to a common end with religion, modern

science would counsel a few things as being fundamental. First, the children should have full access to nature in as great variety of forms as possible, that they may acquire an unbiased knowledge of the actual facts. Second, it would have the children regard nature as they find it, not as a complete or finished product, but as a scene of activity, of change, of development, of growth. How many times have we all envied Adam, whose privilege it was, according to the biblical account, to look out upon a fresh and newly created world. How ravishing must have been the picture as the landscape unveiled itself before the eye! How bright the sunshine! How pure the air! How unsullied the flowers! How strange and indescribably beautiful the song of birds! How full of life and joy such a day would seem! We all have mourned because we did not see the pristine freshness and vigor of that glorious opening day.

But science has shown that the wonderful creation still goes on. We may see a world each day as freshly created as that gazed upon by Adam, if we but use our eyes. It is not necessary, either, to look for this in the remote parts of the earth. The vacant lot, the roadside, the edge of the pavement are all full of evidence that creation still goes on. What an interesting field for study, for example, we have in the history of the area upon which the city of Chicago stands. The early glacier; the flood of waters; the slowly filling marsh, the procession of animals and plants that accompanied these changes; the coming of man; the founding of the city with its intricate physical and moral relations with all the rest of the earth form the interesting chapters of a history that came to pass in the great natural order of growth. It is this broad presentation of nature that children must have at first. The details are beyond the comprehension of their unreflective minds. By this means, at every step, there will be the suggestion of order and law. If the child can see nothing but the sail-flecked lake upon one hand and the city upon the other, a vague consciousness of their relationship will appear, and both city and lake will seem to him to be equally *natural*.

The mind of the child, like that of primitive man, is filled

with vague myths and superstitions about the most common things. These feelings and instincts should be respected, but they should not be encouraged nor cultivated. It is the mission of a scientific education to free the human mind as early as possible from the thrall of superstition and from the domination of the fancies of myth and miracle; to teach the individual that all his experiences should be made the subject of careful and fearless investigation, with fair reason to believe that in some degree they may be explained and understood. It has been thru such patient study that man has found himself to be more and more in alignment with the great plan of nature thru which he is coming to see

> "Good in all;
> In the satisfaction and aplomb of animals,
> In the annual return of the seasons,
> In the hilarity of youth,
> In the strength and flush of manhood,
> In the grandeur and exquisiteness of old age,
> In the superb vistas of death."

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III

THE DEGREE OF DOCTOR OF PHILOSOPHY [1]

During the past twenty-five years very great and very hopeful advance has been made in real university work in America. Not merely is this true of the professional schools of our universities, but it is even more true of that department which we have agreed to call the graduate or post-graduate school. We may offer ourselves especial congratulations upon this fact, for it is on the work of this department, the training of the advanced instructor, that the hope of our educational and scientific future ultimately rests. It is not too much to say in the way of self-praise that the results which we are now reaching in this field compare very favorably with those attained in any other country of the world, even in Germany, the motherland of our methods, and this is true both of the training we give the student in the processes of scientific work and of the doctor's dissertation regarded as an evidence of that training. Indeed in the line of study of which I know the most, in history, the tendency is easily discernible to require a thesis distinctly superior to the average German thesis, at least if we may judge by those which find their way into print. Were joyful optimism the part of wisdom, we have abundant grounds for resting content, but it is as much a commonplace in education as in any other line of human effort that a liberal-minded dissatisfaction is the condition of progress, and I am not afraid of being thought too gloomy a pessimist if I call attention to some points in the present situation where improvement is possible.

[1] This article is based on a brief paper introductory to a discussion on the subject of the doctor's thesis and degree forming a part of the program of the American Historical Association meeting at Chicago last December. While keeping closely to the lines of my original paper, I have availed myself freely of suggestions offered in the discussion which followed its reading for its enlargement and improvement. An abstract of the discussion may be found in the February number of this REVIEW, and in the April number of the *American historical review*.

In following exclusively in our graduate schools the German practice as to the degree of doctor of philosophy, and in making it our highest degree, we have entered, I believe, upon a road that will lead us to a result unsatisfactory in itself and far short of the best to be reached. How any other road was open to us in the conditions surrounding our early university growth it is impossible to see; and if we are willing to regard the point we have now reached as a beginning merely, and to turn our future advance slightly aside, the outcome will be not merely better than anything we can reach in the present direction but, I firmly believe, better than has been reached in any other country. If we consider our doctor's degree in itself alone, looking only to what it really means and to the requirements we make of the candidate, it is open to no serious objection. If, however, we regard it as the highest degree of the academic career, considering what it seems to imply and the point at which it stands in the educational development of the student, the case is quite different.

The degree of doctor of philosophy has come to be almost strictly a professional degree. That it is still taken and will continue to be taken by a few for general culture purposes is immaterial. The same thing is true of law and divinity degrees and the fact should no more affect our thinking or our methods in one case than in another. As a professional degree the doctorate in philosophy means that one who has attained it has qualified himself to become a specialist instructor; that he has given himself to the study of a particular branch of learning until he has obtained a critically sound familiarity with its scientific methods, and presumably the ability to teach the subject in the way which is possible only to one who has acquired an inner and intimate knowledge of it. This is a perfectly definite stage in the educational development of the student and, as I shall have occasion to say again, it ought certainly to be marked by an equally definite academic degree. To grant, however, at this point our highest attainable degree is certainly doubtful policy.

In the first place, by granting our highest degree freely to everyone who completes a not long course of study, which calls

in the end for very little but perseverance and industry, and in requiring of the candidate as a dissertation a piece of original work, we are doing our best to magnify greatly what are really small and elementary things. For this result our practice in reference to the doctor's thesis is largely responsible. By insisting on a piece of original work, as a contribution to knowledge, which except in the most favorably situated branches can only be a slight matter, the student is encouraged to believe, and in many cases the instructor also, that the result is really of great importance, and by the printing of the thesis this belief is strengthened. The tendency towards a barren scholasticism, in which process is the all-important thing without reference to the value of the result, is so strong in every line of intellectual work that it can only be considered a misfortune that the forming educational system of a new country should, in its highest stages, adopt a method which will inevitably strengthen that tendency. In my own field of work, in history, it is also to be deplored that the ease with which at present dissertations of real value can be written in American history blinds us to the inevitable result. In a field which has as yet received so little intensive cultivation there may perhaps seem no immediate danger that subjects of real importance for doctors' dissertations will be exhausted —and very likely the worker in modern European history may feel the same in regard to his field. But in the history of education a quarter of a century is not a long period, and in a quarter of a century the search for thesis subjects in these fields will certainly be a very different thing from what it is now. In mediæval history we have already reached a point where the thesis is being steadily driven back to smaller and smaller matters, but with no decline of the weight of importance attached to it by student and instructor. In this particular, the past of mediæval history is as instructive as its present. Out of the hundreds, perhaps thousands of published doctors' theses of the past fifty years in this field exceeding few have been of any real importance, have made real and permanent contributions to knowledge. Perhaps a larger number, but still comparatively few, have spared the real scholar a little

labor in his field, but the great mass are entirely insignificant. They cumber the shelves of our libraries, and they are a dead weight of impediment to the scholar if he is foolish enough to feel that he must wade thru the mass to see if he has been anticipated on some point which in truth he is himself for the first time making a part of the world's organized knowledge. I wish to be distinctly understood to assert that the history of the historical doctor's dissertation in Germany is a warning to us against following the same road, and to predict that if we go on as we are doing for another half-century we shall repeat the result, and in all human probability in American history as in other fields.

In the second place, the granting of our highest degree at the point in the education of the individual where we now place it is unfortunate, because it favors the belief that what is a mere beginning is the real end to be obtained. It gives the impression of recognized and finished scholarship to one who has only learned the tools of the trade and made a first attempt at their use. It gives the impression of recognized fitness for university work to one who has as yet done nothing to show any such fitness. As a result we have in one direction a large body of men whose doctor's thesis is their last attempt at productive scholarship, who having come to believe that they have reached the only point it is necessary for them to reach, make no attempt to go any further. In the other direction we have a large number of men who eagerly expect college or university positions for which they have no fitness and, after a period of waiting, fall back into secondary-school work with a feeling of discontent and failure which is undeserved and unnecessary. Both these results are of course bound to happen under any system. My point is that our present system deliberately encourages them and makes the number of cases unnecessarily large.

In suggesting that we ought to take a new step in developing our higher university work, I am not proposing that we should cease to give the degree of doctor of philosophy as at present. The objections which may be urged against it do not lie against it, considered in itself, but considered as the

highest degree we give. A degree is certainly needed at the point where we now grant it to mark about that amount and character of attainment. But we need for the logical completion of our educational system something more and something different. We need in the first place to make it clear to all concerned that our present degree does not mean acquired scholarship, that it only means that the recipient has got ready to become a scholar. We need in the second place something that will mark the real attainment of that point which our present degree is sometimes supposed to mark, established scholarship, confirmed power of scientific production, and tested ability to train others in scientific method; or, to put this last point in other words, our highest professional training schools ought to distinguish between those whom they pronounce fitted for secondary and lower collegiate instruction, and those whom they pronounce qualified to conduct university work of the higher grade. That a mark of this kind is needed is clearly shown by the largely unconscious tendency in some of our best universities to transform our present degree into something distinctly higher than the German doctorate. That this tendency ought not to go any further I shall try to show later, but it is a sign of things which should not be overlooked.

There are two possible courses by which we might bring about the result which I have suggested. We have already two graduate degrees, the master's and the doctor's. Were it practically possible by advancing our standards to transform our master's degree into about what our present doctor's is, and to advance our doctor's to about the French doctorate in letters, we should have ideally the most desirable result. That some of the changes which would be incidental to such a process are in themselves desirable is also true. Our master's degree stands now for so many things that it really stands for nothing. It is given in the first place as a purely honorary degree, and as such it is usually the first honorary degree given to the man of distinguished achievement who has had no academic training; secondly, it is given by universities and colleges to their own graduates who pursue a course of study *in absentia* under the direction of some department of the

academic faculty; thirdly, it is given for a year of residence study which is really no more than a fifth year of undergraduate work, or in some cases only a fourth; and in the fourth place it is given for a year of genuine graduate work, that is of introduction into the principles of scientific procedure. Here is a variety of practice which makes it impossible to say what the degree means in any particular case, nor would it be difficult to show that, if it were confined in practice to the highest requirements now existing for it, it would still mark no stage in the educational development of the student deserving to be marked by a special academic degree. Theoretically, then, it would be a desirable change if we could advance our master's degree to the point at which our doctor's degree is now given.

Actually, however, such a change is, I believe, not merely a practical impossibility, but undesirable as well. A proposal to make such a change would hardly deserve consideration from the point of view of practical possibility. Custom is now so fixed that to attempt to sweep the present usage out of existence, to introduce uniformity of practice, and to maintain a standard equivalent to our present doctorate would be to attempt an absurdity. Nor would it be desirable if it could be done. We distinctly need an honorary degree of this character among our rewards for successful achievement, and tho the other uses of the degree may be difficult to defend on theoretical grounds, they are very useful. It would be a distinct loss to our educational system to give them up. Our master's degree ought really to be left as it is, improved somewhat in details, but not so advanced in standard as to encroach on the field of the doctor's degree.

If it is not likely that we can or ought to advance the standard materially for the master's degree, then the degree of doctor of philosophy should continue to be given about as at present. It should stand for the same amount and kind of training as now. In the historical and allied branches it should mean a thoro training of the critical judgment and a good command of the methods of historical analysis and construction, and this command should be shown in a thesis of about the

present character. In this thesis, however, two changes should be made from our present practice. First the thesis should not be required to be an original contribution to knowledge. It should be remembered that the object of the thesis is not to establish new facts. It is to prove that the candidate knows how to handle scientifically a body of original material—and this should always be required—and to construct from it a critically sound account. For this purpose it is necessary that the process be original to the student, but not that the result be new to the world of knowledge. To state extreme cases, which I must not be understood to advocate for practical adoption, a full command of historical method can be as well shown in a re-analysis under proper conditions of materials already used on a topic apparently exhausted, or in an investigation which leads to a merely negative result, as in one which makes a new contribution to knowledge of some slight importance. The disposition to exaggerate the importance of the thesis in this regard and to insist on originality of result would be properly checked if the present degree were looked upon as introductory and elementary, as it really is, rather than as final.

In the second place there should be no rule requiring the printing of the thesis, and in ordinary cases this should not be expected. We have so far fortunately escaped such a general rule, but the drift of practice is more and more towards it, and should be checked. The one strong reason for such a rule is obvious. It is that without it there will be great temptation to grant the degree according to merely personal and local standards and that it will in consequence be lowered and cheapened. But the experience of Germany shows clearly that this rule neither brings about uniformity of practice nor maintains a high standard in the individual university. The only real influence on which we can count to maintain a high standard is the inevitable effect upon the reputation of the university which lowers it. The experience of Germany shows indeed that this consideration is not always effective, but it shows also that the penalty is paid. To attempt to maintain the standard of the degree by a rule requiring the printing of

every thesis is to appeal to a force insufficient for the purpose and to lead the way to results as unfortunate in themselves as the occasional and temporary lowering of the standard. There should be of course no rule against the printing of theses, and those should be printed which are contributions to knowledge of real importance, as some occasionally will be, frequently for a time in American history; but it should always be felt that a heavy burden of proof rests upon the instructor to justify his decision to print. If, again, the degree were put into its proper place in our educational scheme, the tendency to insist on the printing of every thesis would be happily counteracted.

With such modifications as these, our degree of doctor of philosophy should remain at about the present point. We clearly need a degree which gives us the guarantee of a university of reputation that its holder has obtained a specialist knowledge, a trained critical judgment, and a command of scientific method; in other words, that he may be trusted with work in which the specialist's insight is demanded. And if this degree is to serve its most useful purpose it should mean no more than this. The effort, already making in individual universities, to advance the requirements for the degree materially beyond the German standard can only result in introducing that confusion into our practice which now prevails in regard to the master's degree. On the theory that such a change might give us the advanced degree which we need, there would be demanded of the candidate a length of academic residence prohibitive in ordinary cases. This is, of course, only saying that the effort cannot be successful to that extent. Nor should those who are engaged in it overlook the fact that to demand of the candidate a wider knowledge of fact is not to require a greater fitness for the degree. The man who has learned ten thousand facts of history has not thereby better qualified himself for this degree, as it ought to be interpreted, than the man who has learned five thousand, provided they have acquired an equal command of the tools and processes of investigation. A successful effort to advance the requirements for the doctor's degree much beyond the present standard would destroy our fairly satisfactory uniformity of prac-

tice, would deprive us of a much-needed mark of this stage in the educational development of the student, and would in the end fail to give us the advanced degree we really need. It would be far better to recognize consciously what this tendency really means, and what the experience of other countries shows, our need of an advanced degree, and to introduce it deliberately under regulations carefully framed to guard against abuse.

This is the practical proposal which I have to make: the introduction by agreement of a new degree to mean about the same as the French doctorate in letters, and somewhat less than the Russian doctor's degree, and to mark proved attainments and abilities of the highest university grade. It should stand for a much longer and more thoro training than the degree of doctor of philosophy, carried on in the main by the scholar himself from that beginning, certainly with no required academic residence. Successful experience in training others in the methods of scientific work should always be demanded, and proved ability as an investigator and writer, showing a well-established habit of productive scholarship. The thesis, always to be printed, should be a valuable contribution to knowledge based on the study of an extensive mass of material critically handled. This degree should call for considerably more maturity than the first; it should not ordinarily be possible to men under thirty or thirty-five years of age and to very few in the country at any one time; it should distinctly mark abilities as well as attainments, and should mean the possession of those qualities which distinguish the man of the first rank from the man of the second, but it should never be conferred as an honorary degree; and finally, it should be regarded as a declaration by the university faculty conferring it that they have found a man capable of university work of a high grade.

The most serious objection which has been urged against this proposal is that it would bring in a new degree to be granted by all sorts of institutions, with all sorts of standards, that it would therefore fail to accomplish the result desired, and that in the end our present confusion would only be worse confounded. That there is some danger of this under our

American freedom must be admitted. Our success, however, in rescuing the doctorate in philosophy from the worst abuses which at one time threatened it, ought to lend us hope that we may do even better with a degree having no history behind it, but deliberately introduced for a definite purpose. The degree should be put from the start under the control and responsibility of the Association of American Universities and it should be understood that it is to be conferred by the members of that association only. Other safeguards are easily possible. The degree recently established in France—*universitatis doctor*—tho at least two serious objections may be urged against it as a practical proposal, can be made to serve as an example. It might be made the rule that the letters signifying this degree should always be followed in use by the initial or the abbreviation of the university conferring it. U. D. H. or U. D. Harv. would always carry its meaning with it,—and if the symbols of the degree were never used in any other form the conferring of the degree by unqualified universities would probably be rare and harmless.

The introduction of such an advanced degree would tend to bring about uniformity of practice in regard to our present graduate degrees, and stop our restless efforts to advance the standard for them beyond what can easily or wisely be done. Without something of the sort we must expect, I think, that such advance will take place, irregular and unsystematic, and leading to an undesirable result. By such a plan we should gain the advantages of both the German and the French practices; we should retain such influence as the university has on the secondary schools and the smaller colleges thru the training of their instructors, who would then be certified for the work by a degree recognized as having that especial meaning, and such teaching would then be looked upon as a regular and necessary part of the candidate's training for the highest degree; we should avoid conveying to the student a wrong impression of his attainments and prospects; and we should escape the desolating flood of printed dissertations with which we are now threatened.

GEORGE BURTON ADAMS

YALE UNIVERSITY

IV

BIBLIOGRAPHY OF EDUCATION FOR 1904

Compiled by James Ingersoll Wyer, Jr., Librarian of the University of Nebraska, and Isabel Ely Lord, Librarian of Pratt Institute Free Library

INTRODUCTION

This bibliography, which is the sixth similar annual summary of educational literature, is planned to include:

a. Books on educational subjects printed in English and bearing the imprint date 1904.

b. Important articles on the same subject from the periodicals of 1904.

c. Valuable papers published in the transactions of educational societies that bear the imprint date 1904.

d. All chapters of distinct educational interest from any books bearing date 1904, and all notable matter on educational topics published during 1904, wherever found.

It does not include:

a. Purely local current literature of separate institutions, provinces, colonies, or states. For all such material the student is referred to reports of state departments and of the thousands of educational institutions in this country, in Great Britain, and in the colonies.

b. Unimportant matter, such as is being constantly published in journals.

c. Text-books.

d. New editions with slight and unimportant changes.

The distinctive features of the compilation are:

a. The careful analysis of all important periodicals.

b. The liberal annotation.

c. The classification by subject matter so that the worker in any line may find together the literature of interest to him. The Decimal Classification has, with a few deviations, been followed, both as being on the whole the most satisfactory classification in use, and as being very widely used by libraries.

A detailed outline of the classification precedes the bibliography, and is so full as to serve readily as a subject index. An author index of names is appended.

Unanimity, or even general agreement, cannot be hoped for as to the selection, from the vast range of the annual literature on educational topics, of the articles that are best worth mention in a list like this, a list aiming at selection rather than completeness. Most of the current contributions appear in the proceedings of educational societies, and when the annual volume of papers and addresses of the National Educational Asso-

ciation, the most important body of educators in the country, contains so much that, however pertinent and profitable it may have been as originally given, is trivial or worthless when considered for the purposes of this bibliography, the task of the bibliographer in examining the annual grist of similar grain is not an easy one. It has, indeed, seemed wisest in case of doubt to include certain titles of apparently indifferent value rather than to risk the omission of articles that might be helpful to someone.

It is not claimed that all the matter listed here has permanent value. Much of it is but current chronicle, yet as such topics are to-morrow matters of educational history, it seems proper to include some of the most important literature relating to them. Indeed, several titles that seem to have no value at all are included because they appear under such auspices or in such pretentious form as to promise value, and it is thought important to list such items with a word of warning.

According to custom, the compilers submit the following twenty titles as fairly representing the cream of the year's product—books that should be bought by every large library, read by, or accurately known to, all serious students of education, and that are indispensable to those interested in the particular topic treated.

The first, third, fourth, and fifth of the groups into which these titles fall show that The philosophy of education, American education, Religious education and Methodology of special subjects have received much and effective attention during 1904.

These books are of two kinds, the rather technical treatise of value chiefly to the specialist in education, and the more popular work of general interest. Any hard-and-fast division on these lines is manifestly impossible, but the individual judgment of the compilers is that numbers 2, 4, 7, 8, 11, 12, 19, and 20 are of the second order, and, therefore, perhaps better suited than the others for the small public library that cannot afford to buy all the books on education.

Full title, publisher, price, and descriptive notes will be found, thru the index, where each book is entered in the bibliography under its proper heading.

1 Boone—Science of education.
2 Briggs—Routine and ideals.
3 Horne—The philosophy of education.
4 Wilson—Pedagogues and parents.

5 Hall—Adolescence.

6 Chancellor—Our schools.
7 Crawford—The college girl of America.
8 Dexter—History of education in the United States.

9 Moseley commision—Report.

10 Coe—Education in religion.
11 Griggs—Moral education.
12 Pease—Outline of a Bible school curriculum.
13 Religious education association—Proceedings.

14 Collins—The teaching of German in secondary schools.
15 Herrick—Meaning and practice of commercial education.
16 Jespersen—The teaching of foreign languages.
17 Lloyd and Bigelow—The teaching of biology.
18 New England history teachers' association—Syllabus.

19 Rowe—The lighting of school rooms.

20 Talbot—Samuel Chapman Armstrong.

The order of the titles is not accidental. The first four books are four serious contributions to the treatment of the vital and fundamental significance of education. Two of them (Boone and Horne) are cast in the technical, professional terminology, while the books by Briggs and Wilson are more adapted to the lay reader. Numbers 10-13 show that the remarkable awakening in religious education, noted last year, is still bearing fruit. Numbers 14-18 form a worthy group on method in special branches in secondary schools, numbers 15 and 17 being the only adequate works on their subjects adapted to American schools and conditions.

The compilers again ask for criticism and suggestion; they again offer their annual list with diffidence, but with a hope that it may be of service.

OUTLINE OF CLASSIFICATION

Bibliography.
370 EDUCATION—THEORY, PHILOSOPHY.
  370.1 Psychology and education.
  370.5 Periodicals.
  370.6 Associations.
  370.7 Normal schools.
  370.9 General histories of education: historical material for special countries arranged alphabetically by countries.
    370.92 Biography.
371 TEACHERS, METHODS, DISCIPLINE
  371.1 Teachers.
    371.12 Training of teachers.
    371.16 Salaries for teachers.
    371.27 Examinations.
  371.3 Methods of instruction (For methods in special branches see 375 and its subdivisions).
  371.42 Manual training.
  371.5 Government, discipline, punishment.
    371.52 Attendance, truancy.
  371.6 School buildings and furniture.
  371.7 School hygiene.
    371.71 Health of students.
    371.73 Physical education, gymnastics, athletics.
  371.8 Student life and customs.
  371.9 Education of special classes.
    371.94 Negro.
    371.95 Indian.

372 ELEMENTARY EDUCATION
372.2 Kindergarten.
373 SECONDARY EDUCATION OTHER THAN PUBLIC, arranged alphabetically by countries.
374 SELF-EDUCATION: HOME EDUCATION
374.5 Popular lectures.
374.9 Popular institutions.
375 CURRICULUM
375.04 Elective studies.
375.3-375.9 Special subjects, divided according to Decimal Classification.
376 EDUCATION OF WOMEN
376.7 Co-education.
377 RELIGIOUS AND ETHICAL INSTRUCTION
378 HIGHER EDUCATION; COLLEGES AND UNIVERSITIES; for special countries, arranged alphabetically by countries.
378.01 College entrance requirements.
378.2 Academic degrees.
379 PUBLIC SECONDARY EDUCATION
379.14 School laws.
379.15 School supervision.
379.5 Secondary education; in special countries arranged alphabetically by countries.

The abbreviations used are ordinary ones easily comprehended. Volume and page are separated by the colon. Thus 6: 386-407 means Vol. 6, pages 386 to 407. N. E. A. Proc. is, of course, National Educational Association, Journal of Proceedings. The report of the U. S. Commissioner of Education, Dr. W. T. Harris, is this year not included, since there is no report bearing the imprint date 1904. The first volume of the Report for 1903 is out as this bibliography goes to press, but as the imprint is 1905, it will be entered in the Bibliography of education for next year. No date beyond the month is given in the references, as 1904 is always understood.

BIBLIOGRAPHY OF EDUCATION, 1904

Bibliography

See also No. 31.

1 **The most** notable school-books of 1903. (School world, Jan. 6: 20-23.)
A useful classified list, giving publisher, price and notes. No books published in America alone are included.

2 **Nelson, C. A.** Analytical index to the Educational review, v. 1-25, January, 1891, to May, 1904. 218 p. O. Educational rev. pub co., Rahway, N. J. $2.
This index will greatly increase the reference value of any set of the Educational review, and will be of service also to all students of, or writers on, educational topics, since it is a contribution to the bibliography of the whole range of educational subjects.

3 **Select** lists of books for the school library. (School world, Jan.-July.)
A general article by J. M. Lupton, with lists on various subjects by F. J. C.

Hearnshaw, C. L. Thompson, T. D. Herbertson, S. E. Winbolt, R. M. Walmsley, O H. Latter, J. Sergeant and J. R. Broadhurst.

4 **Watson, Foster.** A select library of pedagogy. (School world, July. 6: 257-60.)

Made in reply to a request for such a library, to cost £5.

An admirable selection admirably annotated by running comment. Every teacher should go over the list carefully, to discover possible gaps in his or her own reading in study. Prices are given—of course in English money.

One regrets that a paper of the high standard of the School world should allow *Campayne* to stand for *Compayré*.

5 **Wyer, J. I.** Recent educational bibliography. (School rev. Oct. 12: 653-61.)

In this seventh similar annual list twenty-five items are reviewed, which will not be listed here.

6 ——— **and Lord, I. E.** Bibliography of education for 1903. (Educ. rev. June. 28: 38-90.)

Fifth similar annotated list of educational literature in English.

370 EDUCATION—THEORY, PHILOSOPHY

7 **Bardeen, C. W.** Fifty-five years old, and other stories about teachers. 216 p. D. Bardeen, $1.

8 ——— The woman trustee and other stories about schools. 259 p. D. Bardeen, $1.

Fiction has never before been given place in this bibliography, but these stories are so manifestly the product of a rich experience and so full of sound sense, their abundant and obtrusive "morals" are so salutary and their portrayal of certain educational shams and evils so vivid, that they certainly deserve serious reading by teachers and trustees.

9 **Boone, R. G.** Science of education. 407 p. D. Scribner, $1 net.

"This volume, both in matter and method, has grown out of many years' discussion of these topics in the pedagogical department of Indiana university, in the Michigan normal college, before bodies of city teachers and in institutes generally. It is not a treatise upon methods of teaching. It concerns itself chiefly with the educational process and the materials for the derived science. The point of view is historical and the purpose has been to find in the general evolution of function and faculty a consistent background for the current conditions and the presuppositions of the science." Author's preface.

Pt. 1—The nature of education.
Pt. 2—Education as a science.
Pt. 3—The data of educational science.
Pt. 4—Contributing sciences.

10 **Bowen, H. C.** The uses of books for educational purposes. (Educ. times, July. 57: 302-05.)

11 **Colby, F. M.** The rigours of education. (In his Imaginary obligations. Dodd, $1.20 net, p. 167-99.)

A few breezy, piquant, semi-epigrammatic and rather inconsequential paragraphs on Baccalaureate sermons; The significance of freshmen; Coeducation and The trained woman.

12 **Davidson, Thomas.** The education of the wage-earners; a contribution toward the solution of the educational problem of democracy,

ed. with an introductory chapter by C. M. Bakewell. 247 p. D. Ginn, 75c.

Professor Davidson's last work. There are two essays on the inadequacy of our present educational system to meet the needs of democracy, and on a plan for helping to prepare "those who have to go to work early" for the better performance of their duties in life.

There follows an account of Professor Davidson's own work in connection with the Educational Alliance, on the East side in New York. His letters to his evening class are given. A sketch of his life and philosophy prefaces his own writing.

The book deserves careful consideration from all those interested in the big problems of education.

13 **Education** in the leading countries. (World's work, July. 8: 5045-50.)

What it costs to educate a boy in Germany, France, England and the United States, and the equipment the boy receives.

14 **Eliot, C. W.** Education for efficiency; an address before the Harvard summer school. (Jour. of ped. Dec. 17: 97-113.)

"By efficiency is meant effective power for work and service during a healthy and active life," and the address tells what such an education should be.

15 **Groser, W. P.** Education and industrial success. Hazell, 6*d*.

Mr. Groser came to the United States as Commissioner for the Parliamentary industry committee and this is his report.

16 **Hadley, A. T.** Public purpose in education. (Independent, Aug. 4. 57: 254-59.)

17 **Hall, Hamilton.** On some elementary aims in education. 16 p. O. Farncombe, Lewes.

An address before the Childhood society.

18 **Hayward, F. H.** The educational ideas of Pestalozzi and Froebel. 120 p. O. Holland, 2*s*.

19 ——— The secret of Herbart; an essay on education and a reply to Professor James of Harvard. 112 p. O. Sonnenschein, 2*s*.

20 **Horne, H. H.** The philosophy of education; being the foundations of education in the related natural and mental sciences. 295 p. O. Macmillan, $1.75.

This book is the outgrowth of a course of lectures given to teachers in the summer schools of North Carolina and Harvard universities and Dartmouth college. At the last named the author is assistant professor of pedagogy and philosophy. The chapter headings are The field of education and its biological, physiological, sociological, psychological and philosophical aspects. Under each of these heads are epitomized clearly and systematically the currently accepted scientific doctrines.

The book is a welcome addition to Rosenkranz, which has for too long been the only important work in English covering the same field.

21 **Hughes, R. E.** The development of power in school work. 16 p. Arnold, Leeds.

22 **Ingham, C. B.** Education in accordance with natural law. 125 p. D. Novello, 21 E. 17th st., N. Y. $1.50.

The book is somewhat vague, but not unsound. Practical conclusions are based on a lofty and liberal philosophy rather than on psychology. The volume is of the sort that appeared in this country fifteen or twenty years ago, and shows how much current English discussion on education is behind American.

23 **Kant, Immanuel.** Educational theory of Immanuel Kant; tr. by E. F. Buchner. 309 p. D. Lippincott, $1.25.

In 1899 Miss Annette Churton published the first English translation of Kant's Lecture notes on pedagogy. The present is much more than a mere translation. The first hundred pages discuss Kant's theory and conception of education, with its limitations; the text is copiously annotated and an extensive and properly tabulated selection of educational sayings from his other works is added.

24 **McMillan, Margaret.** Education through the imagination. 212 p. O. Sonnenschein, 3*s.* 6*d.*

Clever destructive criticism of the schools as they are, with the statement of what should be, but few suggestions as to how to get it.

25 **MacVannel, J. A.** The philosophy of education. (Teachers coll. rec. Sept. 5: 277-333.)

Annotated syllabus, with bibliographical references of the course in this subject offered at the Teachers college.

26 **Mark, Thiselton.** The new movement in education, with special reference to elementary education. 107 p. O. Charles, 1*s.*

"Mr. Mark is of opinion that slowly and in large part unconsciously our theories of education are adjusting themselves to the theory of evolution." Bookseller.

Not so much for the teacher as for the non-professional person interested in education.

27 **Pomeroy, Eltweed.** Education of the future. (Arena, May. 31: 449-57.)

28 **Rabelais, François.** The teacher's Rabelais, by Geraldine Hodgson. 80 p. D. Blackie, 1*s.* net.

A useful selection.

29 **Remsen, Ira.** Some unsolved educational problems. (In Assoc. of coll., etc., of the middle states, etc. Proc. p. 83-100.)

The complexity of modern education, the requirements for admission to college, especially in English, the modern languages and science, and the question of school hours and vacations.

30 **Rice, J. M.** Why our improved educational machinery fails to yield a better product. (Forum, July-Sept. 36: 96-114.)

31 **Schoolmaster's** year book. 489 p. O. Sonnenschein, 5*s.* net.

Pt. 1—General information.

Pt. 2—Alphabetical list of secondary schoolmasters and schools.

Pt. 3—Articles.

"The first issue promised exceedingly well, and the second, for 1904, has bettered that promise. A batch of articles on educational topics and reviews of a few important books in the former edition have been replaced by a general review of the year, which strikes us as very well done, and by a fully annotated bibliography on educational works published during the last twelvemonth." Guardian.

32 **Spalding, J. L.** The development of educational ideas in the nineteenth century. (Educ. rev. Nov. 28: 335-60.)

Read at International congress of arts and sciences, St. Louis, Sept. 1904.

33 **Wilson, E. C.** Pedagogues and parents. 290 p. D. Holt, $1.25 net.

The clever and witty author writes as a parent and pokes much serious fun at the psychological terminology used by teachers to describe the theory and practice of education, at inelastic, Procrustean grading, at rigidly prescribed curricula. Teachers will say that it is a good book for parents to read; parents will declare that teachers may read it with profit. Both

are right, for the chief contention of the book is that the highest ideal of education is that which shall harmonize and correlate home and school training. Teachers have said this before, somewhat ponderously and technically it may be, and now we should all be grateful for so breezy and sensible a contribution from the parent's point of view.

34 **Withers, H. L.** The teaching of history, and other papers; ed. by J. H. Fowler. 278 p. O. Sherratt, 4*s.* 6*d.* net.

By the late Sarah Feilden professor of education in the University of Manchester. The papers have been printed before. There is an introductory memoir, with a selection from Professor Withers's letters.

35 **Woodward, W. H.** Desiderius Erasmus concerning the aim and method of education. 244 p. D. Macmillan, $1.30, 4*s.*

Following a thirty page biographical sketch are one hundred pages of careful analysis of Erasmus's educational doctrine, and finally translations from such of his writings as bear most directly upon education.

There are two full bibliographies and an index.

370.1 *Psychology and Education*

36 **Hall, G. S.** Adolescence; its psychology and its relations to physiology, anthropology, sociology, sex, crime, religion and education. 2 v. O. Appleton, $7.50 net.

Reviewed at length in Educ. rev. Oct. 28: 217-27; Dial. Aug. 16. 37: 82-85 and in the Jour. of pedagogy, Sept. 17: 9-23 by Will S. Monroe.

37 **O'Shea, M. V.** The value of psychology for teachers. (Elem. school teacher, Nov. 5: 129-41.)

370.5 *Periodicals*

A list of the educational periodicals of the year in the U. S. is given in v. 1 of each Report of the U. S. Comm'r of education. It is arranged by states and by subjects, but is unfortunately not as full or as accurate as it should be.

38 **School,** a monthly record of educational thought and progress, edited by Laurie Magnus. John Murray, 6*s* per year.

First number appeared in Jan. 1904.

370.6 *Associations*

39 **Association of Catholic colleges of the U. S.** Report of the fifth annual conference held in Philadelphia Oct. 28-29, 1903. 100 p. O. Cath. univ. Wash. No price.

This is the last annual report, as the association has now been merged in the Catholic educational association, the report of the first annual meeting of which is noted below.

40 **Association of colleges and preparatory schools of the middle states and Maryland.** Proceedings of the 17th annual convention. 149 p. O. Alb., Univ. of the State of N. Y., 25c. (N. Y. (state) University. Regents bulletin, no. 63.)

The main subjects are entered separately in this bibliography.

41 **Association of colleges and preparatory schools of the southern states.** Proceedings of the tenth annual meeting, Tulane university, New Orleans, Nov. 2-4, 1904. 141 p. O. J. H. Kirkland, Sec., Vanderbilt univ., Nashville, Tenn.

This volume also contains the papers read at the ninth annual meeting, Nov. 1903, which have not been published before.

42 **Catholic educational association.** Report of the proceedings and addresses of the first annual meeting, St. Louis, Mo. July 12-14, 1904. 196 p. O. Rev. F. W. Howard, Sec'y., 212 E. Broad st., Columbus, O. No price.

The Association of Catholic colleges of the U. S., The Conference of diocesan representatives of Catholic parish schools and The Educational conference of seminary faculties have united to form the Catholic educational association. The history of the three component bodies and the Articles of organization for the new one are given.

43 **Conference for education in the south.** Proceedings of the seventh annual conference, Birmingham, Ala., April 26-28, 1904. 183 p. O. Com. on publication, 54 William st., N. Y.

44 **Franklin, C. E.** Is it desirable and practicable to lessen the number of state educational gatherings? (In N. Y. (state) university. 42d convocation. p. 199-207.)

Advocates lessening the number in N. Y. Discussion. 12 p.

45 **National educational association.** Journal of proceedings and addresses of the forty-third annual meeting, St. Louis, June 27-July 1, 1904. 1003 p. O. Irwin Shepard, Winona, Minn., $2.

The important papers are noted separately under the proper subject headings in other parts of this bibliography.

46 **National society for the scientific study of education.** Third year-book. 2 pts; O. Univ. of Chic. press, $1.25.

Pt. 1—The relation of theory to practice in the education of teachers.
Pt. 2—Nature study.

47 **New England association of colleges and preparatory schools.** Addresses and proceedings of the nineteenth annual meeting. 72 p. O. Assoc. No price.

The proceedings appear almost in full in the School review for Dec.

48 **N. Y. (state)—Associated academic principals.** Proceedings of the 19th annual conference. . . . 1903. p. 311-477. O. Alb., Univ. of the State of N. Y., 25c. (N. Y. (state)—University—High school dept. Bulletin 24.)

The important papers are entered separately in this bibliography.

49 **N. Y. (state)—University.** 42d convocation. p. 155-376, O. Alb., Univ. of the State of N. Y., 20c. (N. Y. (state)—University. Regents bulletin no. 64.)

The important papers are entered separately in this bibliography.

50 **North Central association of colleges and secondary schools.** Proceedings of the ninth annual meeting. 112 p. O. J. E. Armstrong, Englewood high school, Chicago, 25c.

51 **Southern educational association.** Journal of proceedings and addresses of the 13th and 14th annual meetings held at Asheville, N. C., June 30-July 3, 1903, and at Atlanta, Ga., Dec. 30, 1903-Jan. 1, 1904. 2 v. O. (163 p. and 299 p.) R. J. Tighe, Sec., Asheville, N. C., $2 per vol.

52 **Teachers** in council, being a record of the Natal teachers convention, 1903; ed. by E. A. Belcher. 178 p. O. Juta, Durban.

370.7 *Normal Schools*

53 **Clark, F. H.** The scope and efficiency of the normal schools of the U. S. (Colorado—University. Investigations of the depts. of psychology and education. v. 2, no. 1.)

The author holds that academic and professional study should not be separated; that only those who have won distinction as practical teachers should teach in a normal school; that observation and practice schools are essential as well as the study of educational history and psychology.

54 **Gordy, J. P.** The function of the university schools of pedagogy. (In N. Y. (state)—University. 42d convocation. p. 185-92.)

55 **Shear, S. R.** The functions of the teachers' training class or school. (In N. Y. (state)—University. 42d convocation. p. 300-06.) Discussion, 2 p.

370.9 *History, General*

See also 378 and 379 with their subdivisions.

56 **Clough, G. B.** A short history of education. 132 p. O. Ralph, *2s. 6d.*

"A very judicious selection of the main points in the whole history of educational ideas and practice (except in America)." Educ. times, Feb. 1905.

57 **Cubberley, E. R.** Syllabus of lectures on the history of education. New and revised edition. Macmillan, $2.60, or in 2 v. $1.50 each.

The first edition appeared in this bibliography for 1902, no. 47. This second edition has many additions and corrections, and is therefore noted here.

58 **Hadley, A. T.** Educational methods and principles of the nineteenth century. (Educ. rev. Nov. 28: 325-34.)

Read at International congress of arts and sciences, St. Louis, Sept, 19, 1904.

59 **Heller, Otto.** Educational exhibit at the St. Louis exposition. (World's work, Aug. 8: 5115-22.)

60 **Monroe, Paul.** Thomas Platter and the educational renaissance of the sixteenth century. 227 p. D. Appleton, $1.20 net. (Internat. educ. ser. v. 57.)

The introduction is by Dr. W. T. Harris. A number of pages are given to the description of the schools of the 16th century. Then follows the autobiography of Thomas Platter, written for his son in 1572. This contains information relating to the wandering scholars of this period and the spread of learning.

61 **Sandys, J. E.** A history of classical scholarship from the 6th century, B. C., to the end of the middle ages. 671 p. D. Macmillan, $3.50.

62 **Smith, A. T.** The educational exhibit at St. Louis. (Educ. rev. Dec. 28: 444-60.)

Mr. O. H. Lang in Forum, Oct.-Dec. 1904, 36: 255-73 also reviews the educational exhibit and a symposium on this subject appears in the N. E. A. Proc. p. 179-87.

63 **Stevens, Kate.** Education among the Mohammedans in the middle ages. (Ped. sem. Sept. 11: 249-63.)

64 **Super, C. W.** Aspects of ancient Roman education. (Jour. of ped. Mar. 16: 207-21.)

370.9 *History, Alphabetically by countries*

Belgium

65 **Boulger, D. C.** Education and religious aspects [in Belgium]. (In his Belgian life. Putnam, $1.20 net. p. 155-70.)

France

66 **Compayré, Gabriel.** Recent educational progress in France. (Educ. rev. Jan. 27: 19-35.)

Freedom in teaching is discussed as the burning question, then the various activities for popular instruction, with concise accounts and statistics of general educational progress.

67 **The total** suppression of the French congregations. (Amer. Cath. quar. rev. Oct. 29: 693-722.)

The alleged reasons. Oswald Kellet.
The real reasons. B. J. Clinch.
The Roman Catholic view of the suppression of the teaching orders.

Great Britain

68 **Clarke, John.** Short studies in education in Scotland. 269 p. D. Longmans, $1.20, 3*s.* 6*d.*

This book deals with current educational problems peculiarly Scotch. First sketching the origins of existing educational institutions it then treats successively of governing bodies and funds, relations of elementary and secondary education, the school board, burgh and county councils, the teacher, the university and the new educational authority. The book is a painstaking and instructive survey with many prudent, tentative suggestions worthy of attention.

69 **De Montmorency, J. E. G.** The progress of education in England: a sketch of the development of English educational organization from early times to the year 1904. 267 p. O. Knight, 6*s.* net. (Local government library.)

70 **Hughes, J. L., and Klemm, L. R.** Progress of education in the century. 508 p. O. Linscott. (The nineteenth century series.)

71 **Webb, Sidney.** London education. 219 p. O. Longmans, $1, 2*s.* 6*d.* net.

CONTENTS: The evolution of an educational system. The organisation of the university. The organisation of commercial education. The organisation of the polytechnics. The organisation of the library service. The lion in the path.

An admirable treatment of the subject. Its value is chiefly for England, but by no means entirely.

India

72 **Great Britain—India office.** Progress of education in India 1897-98 to 1901-02. 2 v. Q. Eyre, 7*s.* 6*d.*

An important, careful, full account. It is rather clumsily arranged, but indexed. v. 2 contains maps and tables.

Japan

73 **Japan—Agriculture and commerce, Dep't of.** Education [in Japan]. (In their Japan in the beginning of the 20th century. p. 742-70.)

The volume was published by the Imperial Japanese commission to the

Louisiana purchase exposition. The account is a most useful one, giving a remarkable number of data in less than thirty pages.

74 **Simmons, A. T.** Education and progress in Japan. (Nature, Mar. 3, 69: 416-18.)

A brief outline of the change which has taken place since 1868, when the first provisional board of education was formed.

Sweden

75 **Education** and mental culture. (In Sweden; its people and its industry, p. 286-359.)

An accurate, concise, well-illustrated account prepared for the volume printed by the Swedish government for the Louisiana purchase exposition.

76 **Heidenstam, O. G. von.** Public education [in Sweden]. (In his Swedish life. Putnam, $1.20 net. p. 89-110.)

Turkey

77 **Garnett, L. M. J.** Education and culture [in Turkey]. (In her Turkish life. Putnam, $1.20 net. p. 196-215.)

United States

See also 378, subhead United States; 379.1; 379.15; 379.5; subhead United States.

78 **Dexter, E. G.** A history of education in the United States. 656 p. O. Macmillan, $2 net.

More correctly a well-arranged, concise compilation of data (largely statistical) for a history of American education. It will be compared at once with Dr. Boone's volume, which is now fifteen years old. Aside from this limitation of date and altho the books are very much alike in method and scope, there should be room on every teacher's book-shelf for both. But neither gives us the real history of the subject which will deal with tendencies, movements, philosophy rather than with mere facts. These ready reference manuals are, however, welcome, and the industry and discrimination which have collected these data and furnished them so abundantly with a bibliographical apparatus are gratefully acknowledged. The book is reviewed at length in Educ. rev. Feb. 1905, 29: 202-08.

79 **Educational** progress of the year. (Outlook, Aug. 6. 77: 776-81.)

Louisiana purchase exposition—Mosely commission—Unification in New York state.

80 **Hopkins, Henry.** Some of the unseen forces that are shaping our national education. (In N. Y. (state)—Assoc. of academic principals. Proc. p. 419-37.)

81 **Johnson, Clifton.** Old time schools and school books. 381 p. O. Macmillan, $2 net.

"This is a charming souvenir of 'ye olden times' in American education. The colonial schools, the New England primer, the district schools, fly-leaf scribblings, Noah Webster, the first geographies, arithmetics, readers, grammars, etc., are described with copious illustrations, both pictures and quotations. The author does not attempt a history, etc., but he certainly has an eye for selection of characteristic facts illustrating history." Ped. sem., June.

United States, Colonies, and Dependencies

Philippines

82 **Beattie, H. P.** American teachers and the Filipinos. (Outlook, Oct. 15. 78: 419-26.)
A description of the actual life and work of a teacher among the natives.

83 **Moses, Bernard.** Education of the stranger. (Internat. quar. Mar. 9: 1-14.)

84 **Nash, F. W.** Educational affairs in the Philippines. (Educ. rev. Mar. 27: 228-35.)
Reviews progress during 1903.

85 **The Philippine** teacher; a periodical for Philippine progress edited under the supervision of the general superintendent of education. John G. Coulter, Manila, P. I. $3.50 per year.
Monthly; first number Dec. 15, 1904.

86 **U. S.—Philippine islands, Education bureau.** Bulletins. nos. 1-8. Manila.
Issued irregularly, each one from 6 to 60 pages and on one topic. The Philippine nautical school; The school of arts and trades; The exhibit at St. Louis; The course of instruction in Philippine schools, are some of the subjects treated in 1904.

370.92 *Biography*

See also no. 155 and no. 162.

87 **How, E. D.** Six great schoolmasters. 276 p. O. Methuen, *7s. 6d.*
Hawtrey of Eton, Moberley of Winchester, Kennedy of Shrewsbury, Vaughan of Harrow, Temple of Rugby, Bradley of Marlborough. Interesting, well done.

88 *Alcuin.* **Gaskoin, C. J. B.** Alcuin; his life and his work. 275 p. O. Camb, univ. press, *3s. 6d.* net.
List of works cited in the notes, 9p.

89 *Almond, Hely-Hutchinson.* **Some** memoirs of the head. Neill.
A privately printed memoir of the late head master of Loretto school.

90 *Cheever, Ezekiel.* **Gould, E. P.** Ezekiel Cheever, schoolmaster; with introduction by E. E. Hale. 94 p. D. Palmer, $1.

91 *Corderius, Maturinus.* **Watson, Foster.** Maturinus Corderius, schoolmaster at Paris, Bordeaux, and Geneva, in the sixteenth century. (School rev. Apr., Sept. and Nov. 12: 281-98; 569-87 and 722-45.)

92 *Davidson, Thomas.* **Bakewell, C. M.** Thomas Davidson and his philosophy. (In Davidson, Education of the wage earners. Ginn, 75c. p. 1-23.)

93 *Eliot, Charles William.* **President** C. W. Eliot, our foremost citizen. (World's work, July. 8: 5016—25.)
With an admirable portrait as frontispiece for this number.

94 *Erasmus, Desiderius.* **Woodward, W. H.** Desiderius Erasmus concerning the aim and method of education. 244 p. D. Macmillan, $1.30.
A thirty-page introductory sketch considers Erasmus mainly in regard to his career as a scholar, while much of the entire book is biographical.

95 *Lancaster, Joseph.* **Salmon, David.** Joseph Lancaster. 76 p. O. Longmans, 60c., 1*s.* 6*d.*

A good account of the chief facts regarding Lancaster (with a chapter on Andrew Bell), the monitorial system, its supporters and opponents. Supplements the essay in Fitch. Educational aims and methods. 1900

96 *Maxwell, William Henry.* **City** superintendent Maxwell of New York. (Educ. rev. Jan. 27: 1-18.)

Biographical and descriptive of his educational work in Brooklyn and New York.

97 *Pepper, William.* **Thorpe, F. N.** William Pepper, M. D., LL. D. (1843-1898) provost of the University of Pennsylvania. 555 p. O. Lippincott, $3.50,

An adequate account of a remarkable life work, with more of high achievement crowded into 55 years than is found in many long lives. Over 200 pages tell of Dr. Pepper's thirteen years as provost of the University of Pennsylvania, and constitute the interest of the volume to educators. The book is sumptuously printed, with eleven handsome illustrations, three of which are portraits of Dr. Pepper.

98 *Platter, Thomas.* **Monroe, Paul.** Thomas Platter and the educational renaissance of the sixteenth century. 227 p. D. Appleton, $1.20 net.

See no. 60 for note.

99 *Spencer, Herbert.* **Herbert** Spencer; a symposium. (In N. E. A. Proc. p. 214-35.)

Harris, W. T.—Spencer and his influence on education.
Cook, J. W.—Spencer's four famous essays.
Sutton, W. S.—Spencer's individuality as manifested in his educational thinking.
Winship, A. E.—Spencer as an educational force.
Rose, W.—Spencer as a philosopher.

100 ——— **Sadler, M. E.** Influence of Mr. Herbert Spencer's educational writings. (Indian jour. of educ. Feb. 12: 80-85.)

101 *Tolstoy, Leo, count.* **Crosby, Ernest.** Tolstoy as a schoolmaster. 94 p. Fifield, 6*d.* net.

Contains an account of Tolstoy's experiments when a schoolmaster.

371 TEACHERS, METHODS, DISCIPLINE

371.1 *Teachers*

102 **Adams, John.** How to be interesting in teaching. (Educ. times, May. 57: 225-27.)

103 **Are** there too many women teachers? (Educ. rev. June. 28: 98-105.)

Reprint of paragraphs from a circular issued by the Male teachers' association of New York city, hence to be taken *cum grano salis* as a bit of special pleading.

104 **Berry, T. W.** How to become a teacher. 96 p. D. Unwin, 1*s.*

"A useful handbook explaining precisely what steps should be taken by a boy or girl who desires to become a teacher in an elementary or a secondary school." School world.
Of course only for Great Britain.

105 **Conant, Howard.** The professional status of school men. (In N. Y. (state)—Assoc. of academic principals. Proc. p. 404-13.)

An argument for more secure tenure of office. Discussion, 8 p.

106 **Jacobs, W. B.** Characteristics of an efficient secondary school teacher. (School rev. Nov. 12: 706-15.)

107 **Maxwell, W. H.** Teachers' compensations. (Educ. rev. May. 27: 468-77.)

Aside from salary.

108 **Milne, W. J.** Qualifications for teaching not determined by examinations. (In N. Y. (state)—University. 42d Convocation. p. 329-36.)

109 **Newell, L. C.** The teacher's problem. 14 p. D. Metaphysical club, 200 Clarendon st., Boston.

110 **Sabin, Henry.** Common sense didactics; for common school teachers. 343 p. D. Rand, $1.

Sensible, inspiring chapters on teaching, government, hygiene, books, morals, memory and a dozen other topics.

111 **Sandwick, R. L.** More men in public schools. (Pop. sci. mo. Sept. 65: 443-51.)

112 **Stableton, J. K.** Diary of a western schoolmaster. 140 p. O. A. W. Mumford, 378 Wabash Ave., Chic., 75c.

371.12 *Training of Teachers*

113 **Adamson, J. W.** Our defective system of training teachers. 16 p. O. Ginn, 3*d*.

"A well-considered plea for the postponement of the professional training of the future teacher until his general education is more or less complete." School world, Mar.

114 **Lewis, F. C.** Professional training of college-bred teachers. (Educ. rev. May. 27: 433-42.)

A discussion of its scope and the theory that underlies it.

115 **Locke, G. H.** Instruction in the organization and administration of schools and school systems. (Educ. rev. May. 27: 456-67.)

116 **Norton, A. O.** Scope and aims of the history of education. (Educ. rev. May. 27: 443-55.)

As a subject to be taught to prospective teachers.

117 **The relation** of theory to practice in the education of teachers, discussed by John Dewey, S. C. Brooks, F. M. McMurry, T. D. Wood, D. E. Smith, C. H. Farnsworth and G. R. Richards. (In Nat. soc. for the scientific study of educ. Third year-book, pt. 1.)

371.16 *Teachers' salaries*

118 **Collins, Vere.** Starving the schoolmaster. (Nat. rev. Oct. 44: 333-38.)

119 **McAndrew, William.** Suggestions on school salaries. (Educ. rev. Apr. 27: 375-83.)

120 **National educational association.** Preliminary report of the committee on salaries, tenure and pensions of teachers. (In N. E. A. Proc. p. 370-77.)

371.27 *Examinations*

121 **British association for the advancement of science.** Interim report of the Committee on the influence exercised by universities and

examining bodies on secondary school curricula. (In B. A. Report, 1903. p. 434-55.)

On the influence of examinations. A good many notes and opinions of value, but not put together so that it is easy to get the general result.

122 **Russell, J. E.** The future development of examinations. (In N. Y. (state)—University. 42d convocation. p. 267-75.)

Foretells the lessening of the importance of the formal test.

371.3 *Methods of instruction*

For methods in special branches see 375 and its subdivisions.

123 **Greenwood, J. M.** Some reflections on method in teaching. (Educ. rev. Oct. 28: 240-54.)

124 **Sandison, Howard.** The problem of method. 230 p. D. Inland publishing company, $1.

"In this volume it is the intention to consider method as essentially the psychological process of the pupil in obtaining possession of the subject matter." Author's preface.

125 **Tadd, J. L.** New methods in education. O. Paul, 8*s.* 6*d.*

371.42 *Manual Training*

See also N. E. A. Proc. p. 593-630 for proceedings of Dept. of manual training. See also 375.6.

126 **Gore, W. C.** Manual training and manual labor. (Elem. school teacher, Oct. 5: 77-81.)

127 **Hatch, H. G.** Technique in elementary manual training. (Elem. school teacher, Nov. 5: 159-63.)

Takes another point of view than Mr. Leavitt's, no. 129.

128 **Kenyon, W. J.** Reasons for manual training. (Educ. Oct. 25: 65-80.)

See sensible editorial comment on p. 116-117 of same number.

129 **Leavitt, F. H.** The place of technique in elementary manual training. (Elem. school teacher, Oct. 5: 72-76.)

Emphasizing the necessity of technique.

130 **Richards, C. R.** Is manual training a subject or a method of instruction? (Educ. rev. Apr. 27: 369-74.)

371.5 *Government, discipline, punishment*

131 **Cowdrick, E. L.** Factors of school government. (Educ. Feb. 24: 367-75.)

132 **Tucker, H. R.** Government in the high school. (Educ. Sept.-Nov. 25: 1-11; 81-89; 152-61.)

Discipline: its scope and maintenance; Pupil coöperation; Punishment; School spirit.

133 **Whitney, M. A.** Student advisers as an administrative device in high schools. (School rev. Jan. 12: 3-10.)

371.52 *Attendance, truancy*

134 **Book, W. F.** Why pupils drop out of the high school. (Ped. sem. June. 11: 204-32.)

A valuable article, illustrating by a mass of data why so many pupils,

especially boys, leave the high school. A list of the literature of the subject is added.

135 **Parsons, J. R.** High school attendance. (Educ. rev. Mar. 27: 293-98.)

Extensive New York state statistics are cited to prove (1) That the statement that only about 5 % of the school population ever enter the high school is false; (2) that if there were no losses from death, failure of promotion thru illness, or other cause, and if the school population were equally distributed, only one-third of the school population could be in our secondary schools at one and the same time; (3) that it is found that the ratio of actual to possible enrollment approximates 73 to 100 in elementary schools and 58 to 100 in secondary schools. Mr. A. C. Ellis of the University of Texas makes a spirited reply in the same journal for Sept. 1904 p. 188-92, to which Mr. Parsons rejoins with a paragraph.

371.6 *School buildings and furniture*

See also no. 138.

136 **Cotton, F. J.** School furniture for Boston schools. Amer. phys. educ. rev. Dec. 9: 267-84.)

Illustrations of position while writing, to show requirements for desks and chairs.

137 **Rowe, S. H.** The lighting of school-rooms; a manual for school boards, architects, superintendents and teachers. 94 p. D. Longmans, $1 net.

The author discusses three causes of the bad lighting of schoolrooms; (a) the selection of the site; (b) architectural requisites and equipment; (c) duty of the teacher or her ignorance of her duty. Under the latter section the directions are simple, explicit and cover all practical details. Thirty-two excellent illustrations are given. Superintendent Greenwood says in Educational review for Nov. 1904 "No superintendent, principal, teacher or architect should fail to read this book, and every member of the building committee of a board of education should not only read but study it."

371.7 *School hygiene*

138 **British association for the advancement of science.** Report of the Committee on the conditions of health essential to the carrying on the work of instruction in schools. (In B. A. Report, 1903. p. 455-64.)

Notes on the essentials of school buildings.
Eyesight in school children.
Need for appointment of women inspectors.

139 **Burnham, W. H.** A contribution to the hygiene of teaching. (Ped. sem. Dec. 11: 488-97.)

A summary of recent progress in the hygiene of teaching, including the conditions of mental work, based upon a questionnaire addressed to normal schools regarding their hygienic conditions.

140 **Chase, L. G.** Physical defects of school children. (Charities, Sept. 3. 12: 900-06.)

141 **Egbert, Seneca.** School hygiene and the teaching of hygiene in the public schools. (Amer. phys. educ. rev. Sept. 9: 196-206.)

142 **Mackenzie, W. L., and Matthew, Edwin.** The medical inspection of school children; a text-book for medical officers of schools, medi-

cal officers of health, school managers and teachers. 455 p. O. Hodge, 10*s.* 6*d.* net.

143 **Smith, J. W.** Defects of vision and hearing in the public schools; a hand book for the use of teachers. 103 p. S. Flanagan, 50c.
How the teacher may detect the commoner defects in school children.

144 **Wilcox, R. S.** Practical hygiene in the public schools. (Medical record, Sept. 17.)

371.71 *Health of students*

145 **Hookham, George** Free meals for school children—a Birmingham experiment. (Nat. rev. Dec. 44: 718-30.)
A very careful detailed account of the way things are done at Birmingham and the arguments for doing them. The system seems admirable. "Of every £100 total outlay, £84 reaches the children's mouths in the shape of the best possible food."

371.73 *Physical training; gymnastics; athletics*

146 **Barton, H. J.** College conference of the middle west. (Educ. rev. Jan. 27: 42-52.)
This is the body, commonly called the Big Nine and formed by the Universities of Michigan, Minnesota, Wisconsin, Illinois, Indiana, Chicago, Iowa, Purdue and Northwestern, that attempts to control and maintain on an amateur basis the athletics at the component colleges. It has also had a considerable effect in setting standards for eligibility at non-conference colleges in the middle west.
It is notorious that the conference and all its minute and carefully considered rules are singularly impotent to achieve the results desired, but they at least afford a *modus belli* and have probably been of more good than harm to amateurship. The original rules of 1895 are given in this article, their evolution and amendments, and the present rules in full.

147 **Brunton, Sir Lauder.** The National league for physical education and improvement. (Nat. rev. Nov. 44: 489-98.)
The League is being organized and the elaborate plan is given in full in this article.

148 **Few, W. P.** The place of athletics in education. (Sewanee rev. July. 12: 327-40.)
The two chief advantages—the counteracting the tendency to intellectual monasticism and that to effeminacy. The two chief dangers, "excess and the spirit that would win by unfair means."

149 **Graves, A. P.** Physical education in primary schools. (Contemp. rev. June. 85: 888-98.)
An English school inspector urges a national system of physical education in British schools.

150 **Gulick, L. H.** Physical education by muscular exercise. 67 p. O. Blakiston, 75c.
The author is Director of physical training in the schools of Greater New York, and the book is a reprint from volume 7 of Cohen. System of physiological therapeutics. The first chapter discusses the physiology and philosophy of muscular exercise and chapter 2 is entitled Materia gymnastica; sports and games; systems of gymnastics. The book is exceedingly practical and should be of value to all who are seriously interested in the subject.

151 **Hain, F. H.** Need of physical education. (Educ. Feb. 24: 356-60.)

152 **Hancock, H. I.** Physical training for children by Japanese methods; a manual for use in schools and at home. 153 p. D. Putnam, $1.25.
This book is addressed to those who have in charge the physical training of children. It is a detailed description, with many good pictures of the Jiu-jitsu exercises, with cautions and suggestions for employing them.

153 ——— Physical training for women by Japanese methods. 152 p. D. Putnam, $1.25.
"In this volume the author has tried, with painstaking care, to make plain the principles of the kind of athletic work that has resulted undoubtedly, in making the little Japanese women the strongest and most cheerful members of their sex to be found anywhere on earth." Author's preface.
It is the Jiu-jitsu exercises that are explained, described and illustrated with thirty-two full-page photographic reproductions.

154 **Leonard, F. E.** The beginnings of modern physical training in Europe. (Amer. phys. educ. rev. June. 9: 89-110.)
Very useful, full account, with 6 p. bibliography.

155 ——— Per Henrik Ling and his successors at the Stockholm normal school of gymnastics. (Amer. phys. educ. rev. Dec. 9: 226-43.)
Bibliography, 3½ p. Ling was the "father of physical training in Sweden."

156 **O'Shea, M. V.** The relation of physical training to mental activity. (Amer. phys. educ. rev. Mar. 9: 28-35.)

157 **Peabody, Endicott.** Athletics in their mutual relations to schools and colleges. (In Assoc. of coll., etc., of the middle states, etc. p. 100-31.)
Discussion by T. D. Wood, G. L. Meylan, C. E. Hammett and others.
No new contribution to the subject, unless it be the urging of field hockey for girls.
See also the N. E. A. Proc. p. 803-41 for papers and discussions in the Department of Physical education; The Proc. of the 9th annual meeting of the North central assoc. of colleges and prep. schools, p. 28-42 and the files of The American physical education review.

371.8 *Student life and customs*

158 **Warner, J. D.** Simplicity and economy in student life. (Cornell alumni news, Nov. 23. 7: 119-22.)
Examines the reasons why student expenses are 50% higher at Cornell than in 1885, and discusses the responsibility of the university administration in the matter.

159 **Johnstone, E. R.** Forward teachers of backward children. (Charities, Sept. 12: 889-96.)
Some results of the summer school for public-school teachers at the institution for feeble-minded boys and girls at Vineland, N. J.

371.9 *Education of special classes*

See also N. E. A. Proc. p. 933-62 for proceedings of Dept. of special education.

160 **Nibecker, F. H.** Education of juvenile delinquents. (Annals of Amer. acad. May. 23: 483-92.)

371.94 *Negro education*

161 **Galloway, C. B.** The south and the negro. 16 p. O. Wallace Buttrick, 54 William st., N. Y. city. (John F. Slater fund. Occasional papers, no. 11.)

Address delivered at the 7th annual conference for education in the south, Birmingham, Ala., April 26, 1904.

162 **Talbot, E. A.** Samuel Chapman Armstrong. 301 p. D. Doubleday, $1.50.

This book, written a dozen years after General Armstrong's death by his daughter, is an authoritative biography. It is of value and interest not only as the record of a strong, brave life, but because it treats both historically and practically of negro education and in a slight degree of Indian education. Very naturally more than one third of the book deals with General Armstrong's twenty years at Hampton.

163 **The work** and influence of Hampton, proceedings of a meeting held in New York City February 12, 1904, under the direction of the Armstrong association. 38 p. O. Armstrong assoc. No price.

Addresses by Mr. Carnegie, C. W. Eliot, H. B. Frissell and B. T. Washington.

371.95 *Indian education*

For material on this topic see N. E. A. Proc. p. 963-85, where will be found the papers read in the Department of Indian education; also the annual volume of Proceedings of the Lake Mohonk conference of friends of the Indian.

372 ELEMENTARY EDUCATION

All material on child-study has been omitted, as this subject is thoroly covered in the annual bibliography compiled by Mr. N. L. Wilson, of Clark University, and printed in the Pedagogical seminary.

164 **Buckbee, Anna.** The fourth school year; a course of study, with detailed selection of lesson material, arranged by months and correlated. 241 p. D. Flanagan, 60c.

"A suggestive outline of suitable topics for teachers of children from nine to ten years old. Three principles; (1) The capacity of the child to do the work; (2) His interest in the material suggested; (3) His mental needs in the later life and larger experience, have been consistently worked out in the scheme of correlation. . . The book is a distinct contribution to the literature of methods of instruction in elementary schools." Will S. Monroe in Pedagogical seminary.

165 **The curriculum** of the elementary school. (Teachers coll. rec. Mar. 5: 103-99.)

The greater part of this monograph is a description by S. T. Dutton and H. O. Pearson of the curriculum of the Horace Mann elementary school.

166 **Experimental** work in elementary schools. (Teachers coll. rec. May. 5: 201-74.)

How to direct the child's home reading; Teaching grammar grade history; Use of games in second grade number work; The school museum; The school playroom. The experiments described were tried in the practice schools at the Teachers college.

167 **Jackman, W. S.** Notes on the work of the University elementary school. (Elem. school teacher, Dec. 5: 193-224.)

No teacher in elementary work can afford to neglect careful study of the work at the University of Chicago school. The second part is The curriculum of the University elementary school.

168 **Norris, W. F.** Elementary schools. 176 p. D. Longmans, 90c. net. 2*s.* 6*d.* net. (Handbooks for the clergy.)

A fair presentation of the case for denominational public elementary schools. By a churchman.

169 **Washburne, M. F.** Study of child life, 3 pts, D. American school of household economics, Chic., 50c. ea.

Leaflets used with mothers for intelligent study of the care and training of their little children.

372.2 *Kindergarten*

For kindergarten material see the files of the Kindergarten magazine and Kindergarten review, and the N. E. A. Proc. p. 379-437.

170 **Atwood, Nora.** The kindergarten and its critics. (Kind. mag., Nov. 17: 133-41.)

171 **Beebe, Katherine.** Kindergarten activities. 133 p. D. Saalfield, Akron, Ohio, $1.

An account of a dozen kinds of activities, aside from the regular gifts and occupations, that have been found useful in kindergarten work. Such for instance as Calendars, Stories, Sand, Celebrations, Cutting, Excursions.

The book seems extremely practical, and its wealth of minute suggestions, lists, and warnings marks it as the outgrowth of actual work.

172 **Boone, M. S.** Kindergarten from a mother's point of view. (Educ., Nov. 25: 142-51.)

Believes in it, but thinks better teachers are sorely needed.

173 **Kindergarten** education. (Teachers' coll. rec., Nov. 5: 407-500.)

A symposium of eleven practical papers on different kindergarten subjects. Plans and estimates are given for a kindergarten room and building.

17. **The kindergarten** in Rochester; its inception, progress and present status. (Kind. mag., Feb. 16: 410-37.)

Account of growth of kindergarten work of a sort typical of that in American cities.

175 **Miller, L. B.** Kindergarten; or home and school culture. 400, p. O. Reilly, 84 Adams St., Chic., $1.50.

176 **Salmon, David, and Hindshaw, Winifred.** Infant schools; their history and theory. 324 p. D. Longmans, $1.50 net.

"The story of the Infant school in England is peculiar, and it is there still a unique institution. It began with Oberlin, Owen, Buchanan, Wilderspin and Stow in whom the leaven of Pestalozzi had begun to work. The kindergarten movement developed upon this basis. The story of this growth occupies the first 128 pages of the book. Part two is more psychological. It treats the beginnings of mental life, perception, instinct, habit, thinking and speaking, memory, imagination, Froebel's theory and the extension of kindergarten methods with older children. The very few pages devoted to the kindergarten in America hardly do justice to the theme." Ped. Sem..

373 SECONDARY EDUCATION OTHER THAN PUBLIC; PRIVATE SCHOOLS AND ACADEMIES

Great Britain

177 **Cholmeley, R. F.** A complaint of public schools. (Independent rev. Aug. 3: 337-53.)

A wholesale arraignment of the English public schools, and of the English parents who support them.

178 *Clifton.* **Clifton** College twenty-five years ago. 196 p. O. Robinson, 7*s.* 6*d.* net.

"The genuine diary of a fag of that period." Athenæum.

179 *Emmanuel.* **Maskell, H. P.** Recollections of Emmanuel School. il. Endowed schools office.

A full account, from official and other sources, of this school, which was founded in Westminster by Lady Dacre in 1594, and removed to Wandsworth Common in 1883.

180 *Eton.* **Bygone** Eton, a collection of historical pictures with descriptive sketch. pt. 1, Q. Spottiswoode, 1*s.* 6*d.* net.

181 ——— **Leigh, R. A. Austen.** Eton under Barnard, 1754-65. O. College Press, Eton, 2*s.*

182 ——— ——— Illustrated guide to the buildings of Eton College. 208 p. O. Spottiswoode, 1*s.*

183 ——— **Selwyn, T. K.** Eton in 1829-1830; a diary of boating and other events written in Greek, ed. with tr. and notes by the Rev. Edmond Warre. 312 p. O. Murray, 10*s.* 6*d.*

184 *Trinity.* **Trinity** College, Glenalmond, il. by E. S. Lyttel. 16 p. O. Morgan, 2*s.*

185 *Uppingham.* **Early** days at Uppingham under Edward Thring, by an old boy. 163 p. O. Macmillan, 3*s.* 6*d.* net.

Thring was head master from September 1853 to October 1887.

United States

186 **What** is the place and function of the endowed academy or of the private high school for boys and girls in our present system of education? (Nat. conference on secondary educ., p.17-48.)

Papers by Arthur Gilman; Mrs. May Wright Sewall; J. H. Bartlett; H. T. Fuller.

374 SELF EDUCATION; HOME EDUCATION

187 **Bevan, J. O.** Study after school days. (Educ. times, Nov. 57: 476-79.)

Supplementary memorandum in Educ. times, Dec. 57:516-18.

188 **Black, Hugh.** The practice of self-culture. 262 p. D. Macmillan, $1.25 net.

Simple, serious chapters on the care and culture of mind, body, heart, conscience and spirit.

374.5 *Popular lectures*

189 **Leipziger, H. M.** Adult education. (In N. E. A. Proc. p. 284-94.)

Dwells especially on the N. Y. City free lecture course.

374.9 *Popular institutions*

190 **Davies, J. L.** *ed.* The working men's college, 1854-1904, records by members of the college. 296 p. D. Macmillan, $1.25.

191 **Smith, C. S.** Working with the people. 161 p. D. Wessels, 50c. net.

A history of the People's institute, New York City, an institution which conducts educational work chiefly in the Cooper Union.

375 CURRICULUM: METHODS IN SPECIAL BRANCHES

All discussions of special subjects are here, whether they concern university, college, special school, secondary school or elementary school, except as they concern college entrance examinations. For those, see 378.01.

192 **Bolton, F. E.** Educational values. (School rev., Feb. 12:170-88.)

193 **The curriculum** of the elementary school. (Teachers coll. rec. Mar. 5: 103-99.)

For note see no. 165.

194 **Feasibility** of a six years' course. (School rev. Jan. 12:15-28.)

Covering what is now the 8th grade, the high school and the first two college years. Discussion at Conference of academies and high schools affiliated with Chicago university.

195 **Lee, Herbert.** High school program of studies and the student's curriculum. (School rev. Feb.-Mar 12:138-47, 197-215).

196 **Liddeke, Frederick.** Extension of the high school course. (School rev. Oct. 12: 635-47.)

And its correlation with higher education on a very much reconstructed basis, with a six year high school course beginning two years earlier than at present.

197 **Lodge, Oliver.** School reform. (Contemp. rev. Feb. 85:153-71.)

A presidential address to the Teachers' guild. He maintains that whatever subjects are studied should be pursued up to a useful point, and that *one* subject should be taught thoroly up to the capacity of the pupil to receive it. A protest is entered against bringing all grist to the classical mill.

198 **McMurry, F. M.** Advisable omissions from the elementary curriculum and the basis for them. (Educ. rev. May. 27: 478-93.)

The same paper, slightly abridged, is in N. E. A. Proc. p. 194-202.

199 **Ostien, L. A.** Two high school reforms. (Educ. June. 24: 621-29.)

Shorten the public school course to eleven years for those who expect to enter college; Show more liberality in electives.

200 **Seerley, H. H.** Public school curriculum. (Educ. rev. Feb. 27: 179-92.)

An address before the Iowa state teachers' association. It gives the results of several years experimentation at the State normal school in Cedar Falls by Prof. W. H. Bender. President Seerley's plan reorganizes entirely the work of the grammar grades; he maintains that the present primary and secondary program may be much shortened without disadvantage.

201 **Sparlin, E. M.** The program in elementary schools. (Educ. Feb. 24:361-66.)

202 **Williams, A. S.** The elementary course of study in city schools. (Jour. of ped. June. 16: 298-314.)

Shall the elementary program be planned and organized as complete in itself, or shall it continue to be largely considered as preparatory to the high school?

375.04 *Elective studies*

203 **Elective** system in secondary schools. (In Assoc. of coll., etc., of the middle states, etc. Proc. p. 7-39.)

A paper by Sup't Maxwell, and discussion by H. Updegraff, W. C. Joslin, C. De Garmo and others. A full and valuable consideration of a much-discussed question.

375.3 *Sociology and economics in the curriculum*

204 **Thompson, R. E.** Current events and civics in secondary schools. (School rev. Dec. 12:798-805.)

Also in N. E. assoc. of colleges, etc. Addresses. p. 58-65, with discussion, 7 p.

375.34 *Legal education*

205 **Scott, J. B.** The study and teaching of law. (Educ. rev. Sept. 28: 130-51.)

The law school is the proper and best, if not the only, means of acquiring adequate preparation for the practice of law. There are three methods of study and teaching now in use, the lecture system, the text-book system, the case system or laboratory method. The latter combines the merits of both the others and with signal merits of its own is the best.

375.5 *Science in the curriculum*

Every science teacher should know *School science*, a journal now in its fourth year, which is especially concerned with science teaching in secondary schools.

See also N. E. A. Proc. p. 843-96 for proceedings of Dept. of science instruction.

206 **An address** to young science teachers by one of H. M. inspectors of schools. (Jour. of educ. (Lond.) July. p. 503-05.)

207 **Balliet, T. M.** Science, geography and mathematics. (Elem. school teacher, Nov. 5: 142-47.)

A discussion of President David Felmley's paper on The teaching of mathematics at the dedication of the School of education of the University of Chicago.

208 **Bass, W. S.** Science in the Francis W. Parker school. (Elem. school teacher, Oct. 5: 97-113.)

An interesting account of the work of the Chicago school.

209 **Boole, M. E.** Preparation of the child for science. 157 p. D. Oxford univ. press.

This book "offers suggestions as to the means by which the scientific condition of mind can be induced. Each mother must decide for herself whether, and to what extent, she wishes to induce this condition. The first desideratum is that parents should form a clear idea of what is the scientific condition of mind; the next that they should know in what consists the preparation for it."

This book is based upon and permeated with a sort of oriental mysticism "certain ideas about the nature of man's relation to Unknown truth which underlay all science in ancient Asia and which is learned from Brahman teachers."

The book is reviewed favorably and at length in the Nation, Jan. 5, 1905.

210 **British association for the advancement of science.** Report of the Committee on the teaching of science in elementary schools. (In B. A. Report, 1903. p. 429-33.)

A few statistics of interest, but nothing else of much value.

211 **Burnet, William.** Science in secondary schools. (Educ. times, May. 57: 230-31.)

Data as to the time spent in scientific studies in the secondary schools of various countries.

375.507 *Nature Study.*

212 **Bigelow, E. F.** How nature study should be taught; inspiring talks to teachers, with an introduction by J. P. Gordy, and suggestions as to the proper method of introducing nature study, by H. A. Surface. 203 p. D. Hinds, $1.

With such excellent books as those of Hodge and Scott available it is difficult to see that this one was really needed.

213 **Jackman, W. S.** Nature study. 96 p. O. Univ. of Chic. press, 75c. (In Nat. soc. for the scientific study of educ. Third year-book, pt. 2.)

The chapter headings are Meaning of nature-study; Scope of nature-study; Nature-study and expression; Number work in nature-study; Nature-study and morals.

214 **McMurry, C. A.** Special method in elementary science for the common school. 275 p. D. Macmillan, 75c. net.

So complete and extensive a revision of the author's Special method in science published in 1896, as to be almost a new book. While the title does not use the term nature study, the book is meant for use in the school work now known by that name. The history, purpose and applications of such study are well described, and the detailed illustrative lessons, courses of study and lists of books should be of great value to teachers.

375.51 *Mathematics in the curriculum*

School science (see no. 185 in this bibliography for 1903) has changed its name to *School science and mathematics* and publishes much excellent material of especial interest to mathematics teachers in secondary schools.

215 **American mathematical society.** Report of a committee appointed to consider the requirements for the master's degree. (Bulletin of the Amer. math. soc., May. 10: 380-85.)

How much undergraduate mathematics should be required of a student with mathematics for his major subject, and who expects to secure a second degree in a year of graduate work? What should this mathematics be?

216 **Association of teachers of mathematics in the middle states and Maryland.** Bulletin no. 1, July, 1904. 56 p. O. Pub. by the association.

217 **Evans, G. W.** Algebra in elementary schools. (Educ. rev. Oct. 28: 305-09.)

218 ——— Graphical representation in arithmetic and algebra. (School rev. Oct. 12: 618-24.)

219 **Myers, G. W.** A practical presentation of some problems correlating mathematics and physics. (School rev. Mar. 12: 233-45.)

220 **Woodruff, E. C.** Teaching of elementary algebra from the standpoint of the teacher of physics. (School rev. Jan. 12: 120-28.)

375.52 *Astronomy in the curriculum*

221 **Myers, G. W.** The neglect of astronomy in the high school. (School rev. Jan. 12: 29-40.)

375.54 *Physical sciences in the curriculum*

See also the files of *School science.*

222 **Hall, E. H.** Physics and chemistry in Prussian and American schools. (Educ. rev. Feb. 27: 144-59.)

This article compares as to method, time-allotment and content the instruction in the secondary schools in France and Germany with that in this country by institutions which plan to meet the requirements of the College entrance examination board and of Harvard.

223 **Herreshoff, J. B. F.** Training of technical chemists. (Educ. rev. Apr. 27: 344-54.)

375.57 *Biological sciences in the curriculum*

See also the files of *School science.*

224 **British association for the advancement of science.** Report of the Committee on the teaching of botany in schools. (In B. A. Report, 1903. p. 420-29.)

Contains many excellent practical suggestions.

225 **Coulter, J. M.** Botany as a factor in secondary education. (School rev. Oct. 12: 609-17.)

226 **Hoskyns-Abrahall, W.** Biology as a factor in the teaching of morals. 28 p. Dove Bros., Bristol, 4*d.*

In teaching girls. Reviewed in School world, Oct.

227 **Lloyd, F. E., and Bigelow, M. A.** The teaching of biology in the secondary school. 491 p. O. Longmans, $1.50. (Amer. teachers' ser.)

Really two separate books. Prof. Lloyd treats botany and nature study; Prof. Bigelow treats zoology, including human physiology. The book is entirely alone in its field and should be known to every teacher of biology in secondary schools or small colleges. It is reviewed in Science, Dec. 23, 1904, 20:880-82. The sensible chapter on temperance instruction in connection with the study of physiology deserves special mention.

228 **Merrell, W. D.** Advantages of a year's course in biology. (School rev. Mar. 12: 216-23.)

229 **What** phases of botany and zoölogy should be emphasized in secondary instruction? (School rev. Jan. 12: 41-62.)

Papers by O. W. Caldwell, B. P. Colton and W. S. Jackman.

375.6 *Technical and industrial education*

See also 371.42.

230 **Freeman, J. R.** Contemporary technical education. (Jour. of the assoc. of engineering societies, Aug. 33: 58-72.)

Education, not information, should be the true aim of the technical school.

231 **Jones, E. D.** Education and industry. (Pop. sci. mo. Mar. 64: 431-44.)

Higher commercial education; trade and manual training; professional and technical education; training for office work.

232 **Watson, E. P.** Mechanic of the future, and his training. (Eng. mag. Feb. 26: 726-34.)

Contrasts practical shop-training of apprentices with the training in manual training and technical schools.

375.61 *Medical education*

233 **Halsted, W. S.** The training of the surgeon. (Johns Hopkins hospital bulletin, no. 162, Sept. p. 267-75.)

A historical sketch of the development of instruction in surgical methods.

234 **Vander Veer, Albert.** Should the regents register college courses as the equivalent of the first year in a medical school? (In N. Y. (state)—University. 42d convocation. p. 223-36.)

Advocating seven years for the two degrees. Discussion by W. H. Wathen, Rush Rhees, C. H. Frazier and others.

375.63 *Agricultural education*

235 **Miller, L. K.** Children's gardens for school and home: a manual of coöperative gardening. 235 p. D. Appleton, $1.20.

A better book than Hemenway—How to make school gardens, noted in this list last year, because while telling just as much about gardens it tells much more about school gardens.

236 **True, A. C., and Crosby, D. J.** American system of agricultural education. 21 p. O. Office of experiment stations, Wash. (Publication 706.)

375.65 *Commercial education*

See also N. E. A. Proc. p. 709-38 for proceedings of Dept. of business education.

237 **Barber, E. M.** A contribution to the history of commercial education; an address delivered at the annual meeting of the Eastern commercial teachers' association, held at Brooklyn, New York, April, 1903. 23 p. O. Assoc. No price.

238 **Crissy, I. O.** *ed.* Professional education in the United States: commercial education in high schools. 127 p. O. U. S. N. Y., 20c. (U. S. N. Y.—College dept. Bulletin 23.)

Prepared under the auspices of the Committee of nine, Department of business education, N. E. A.

CONTENTS.—Language studies, I. O. Crissy.
History and social science. C. A. Herrick.
Mathematical studies. E. L. Thurston.
Science group. F. O. Carpenter.
Technical business studies. H. M. Rowe.
Higher commercial education. C. W. Haskins.
Business education from the lawyer's point of view. E. Lauterbach.
Higher commercial education. G. W. Sanford.
Equipment necessary for commercial schools. W. P. Wilson.
Commercial supremacy of the U. S. J. F. Johnson.

Mr. Herrick's paper appeared last year in the N. E. A. proceedings and has therefore appeared before in this bibliography. Previous publication should be noted, which it is not in this case.

239 **Harris, E. L.** Commercial and industrial education in England. (U. S. Monthly consular reports. Jan. 74: 110-16.)

240 **Haskins, C. W.** Business education and accountancy, ed. by F. A. Cleveland. 238 p. O. Harper, $2.

The scope of this book, which deals chiefly with accountancy as a specialty or profession, may be set forth best by a list of its chapter headings; Business training; the scope of banking education; the profession of accountancy as a moral and educational force; the growing need for

higher accountancy; place of the science of accounts in collegiate commercial education; the history of accountancy; the municipal accounts of Chicago.

241 **Herrick, C. A.** Meaning and practice of commercial education. 378 p. D. Macmillan, $1.25 net.

The author is director of the School of Commerce, Central high school, Philadelphia. After discussing in two chapters the definition, place, and value of commercial education he devotes a hundred pages to detailed accounts of the organization, curricula, and methods of higher and secondary commercial education in Europe. The larger part of the book is reserved for similar but more extensive accounts of American commercial education, including an interesting chapter on private business colleges. The present volume will be much more useful in this country than any other existing treatment of the subject.

242 **Person, H. S.** Professional training for business. (World's work, May. 8: 4767-70.)

375.78 *Musical education*

See also N. E. A. Proc. p. 675-707 for proceedings of Dept. of musical education.

243 **Clapp, H. L.** Music in elementary schools. (Educ. May. 24: 548-55.)

244 **Farnsworth, C. H., and Hofer, M. R.** The teaching of elementary music. (Teachers coll. rec. Jan. 5: 1-102.)

Based on the work done in the Horace Mann school.

245 **Mason, D. G.** Music in the colleges. (Outlook, Apr. 23. 76: 982-87.)

246 ——— Our public school music. (Outlook, Mar. 19. 76: 701-06.)

247 **Norton, E. L.** The selection of school songs. (Elem. school teacher, Nov. 5: 148-58.)

The principles are fully stated, but no definite songs named in illustration. Such explicitness may be less scientific, but it is useful, and would make such an article clearer and more practical for most teachers.

248 **Warriner, John.** Handbook on the art of teaching as applied to music, for the use of students. 176 p. O. Hammond, *2s. 6d.*

375.82 *English language and literature in the curriculum*

The papers read at the fourth annual meeting of the New England association of teachers of English are printed in the School review for May, 1904.

249 **Abbott, Allan.** Experiment in high school English. (School rev. Sept. 12: 550-58.)

Describes a second-year course offered in the Horace Mann high school, called Literary types.

250 **Adamson, J. W.** The teaching of the mother tongue. (Educ. times, Feb. 57: 146-49.)

English composition, grammar and literature.

251 **Chambers, W. C.** How words get meaning. (Ped. sem. Mar. 11: 30-50.)

On the strength of President Hall's editorial assurance that this is an important contribution to the pedagogy of English, it is noted here, despite the misgivings aroused by the sight of "curve" diagrams and questionnaires.

252 **Dole, C. A.** Use of the model in English composition. (Educ. Mar. 24: 426-38.)
Favoring the use of selected passages for imitation by the pupil.

253 **Fleming, Martha.** Must it be a lost art? (Elem. school teacher, Apr. 4: 541-53.)
The question of reading.

254 **Hopkins, E. M.** Handbook on the teaching of English. 153 p. D. Scott, paper, 25c.
The author is professor of rhetoric and English language in Kansas university and the book is issued for the high schools of the state, with the K. U. entrance requirements to the fore.

255 **Long, C. R.** The aim and method of the reading lesson, a lecture. O. Macmillan, 1*s*.

256 **Lovell, T. B.** Report of Syllabus committee on high school English. (In N. Y. (state)—Assoc. academic principals. Proc. p. 361-91.)
A very valuable report. It is vigorously attacked, as well as defended, in the 12 p. discussion.

257 **McDonald, J. W.** Plight of English in the American high school. (Educ. Sept. 25: 16-35.)

258 **Miller, G. R.** The effect of present methods of teaching English on the student's appreciation of good literature. (In N. Y. (state)—Assoc. academic principals: Proc. p. 437-44.)
Chiefly as to the advisability of much grammar-teaching. Discussion, 11 p.

259 **Morris, E. C.** The teaching of English in secondary schools. (Jour. of ped. Sept. 17: 56-76.)
The suggestions given are based on the assumption that the teacher has a college degree; has studied English in college twelve hours a week for a year; and has at his disposal for work in English at least two hours per week for four years of the secondary school course.

260 **Rice, J. M.** Need of a new basis in education. (Forum, Jan. 35: 440-57.)
Continuation of article in Forum 35:269-93, noted last year.

261 **Trent, W. P.** The teaching of literature. (Sewanee rev. Oct. 12: 401-19.)
The substance of a public lecture given at Columbia university, July, 1902. An admirable argument for flexibility and for devoting time to "spiritual inculcation and æsthetic training" rather than to instruction in the facts of literature.

263 **Vaile, E. O.** The National educational association and the spelling question. (Educ. rev. May. 27: 510-20.)

264 **Wade, J. H.** Teaching English to foreigners in the elementary schools. (Educ. rev. Apr. 27: 355-68.)
On the lower east side in New York City.

265 **Wolfe, L. E.** English in the elementary school. (Educ. rev. Sept. 28: 152-63.)

375.84 *Modern languages in the curriculum*

266 **Andrews, M. P.** The reform methods of modern language teaching in English schools. (Jour. of educ. (Lond.) Mar.-Apr. p. 191-93; 277-79.)

267 **Brereton, Cloudesley.** Teaching of modern languages in England. (School rev. June. 12: 441-61.)

Describes three ways in which the modern languages (which means chiefly French, as five times as much French as German is taught in England) are taught. These are the old orthodox classical fashion, the most radical reform method, with undue stress on the oral side, and the method of the "moderates" or "Center."

268 **Brill.** The Teaching of the Dutch language in South Africa, a paper read at a conference of principals of government schools in the Orange River colony. O. Longmans, 1*s.*

269 **Collins, E. W. B.** The teaching of German in secondary schools. 232 p. D. Macmillan, $1.50 net.

This book answers chiefly two questions; 1—What is the best work we can hope to do in a course extending over a maximum period of four years in the high school? 2—What has experience to teach us as to the best way to do it?

The author is no uncertain advocate of the reform method and his pleading chapters are on Pronunciation and Work in speaking. The bibliography is abundant.

270 **Cutting, S. W.** Defects in teaching modern languages. (School rev. Apr. 12: 308-18.)

Neglect of the spoken word and of real prose composition are two of them.

Also in Colorado college studies; language series no. 15-17.

271 **International** correspondence of pupils. (School rev. Jan. 12: 70-96.)

Doniat, J. C.—Its history, purpose and management.
Goettsch, C.—Present status in Germany.
Gronow, H.—Present status in France.
Haertel, M. H.—Present status in English-speaking countries.

272 **Jespersen, Otto.** How to teach a foreign language, translated from the Danish by S. Yhlen-Olsen Bertelsen. 194 p. D. Macmillan, $1.90 net, Sonnenschein, 3*s.* 6*d.*

The author is known to all philologists by his Progress in language, and the present volume, an English translation of his Sprogundervising, (first noticed in this bibliography for 1902, p. 64) shows him to be also an experienced teacher. In addition to his admirable statement of principles for the reformed method of modern language instruction we are shown how these principles have been carried out by the author in the classroom. Jespersen's well known emphasis on phonetics as the cornerstone of his system is set forth in the last chapter on Pronunciation.

273 **Pace, E. A.** French and German in the university. (Cath. univ. bulletin, Apr. 10: 182-95.)

An extended argument of a proposition that would seem to need no proof, that modern languages should be taught in every university, and should form part of the equipment of every candidate for higher degrees. The text for the article is the fact that the Catholic university of America does not offer French or German.

274 **Ransmeier, J. C.** The educational significance of modern language study in the secondary school. (South Atlantic quar. July-Oct. 3: 239-50; 327-42.)

275 **The teaching** of French (School rev. June. 12: 462-524.)

An unusually able and interesting symposium. The following are the principal papers:

Grandgent, C. H.—French as a substitute for Latin.

Snow, W. B. and Fontaine, C.—Teaching of French in secondary schools.
Gregor, L. R.—Translation.
The book reviews in this number are entirely of French grammars and readers, with a list of such French books published during the past year.

276 **Werner-Spanhoofd, Arnold.** Aim and character of the work of first year German. (Educ. June. 24: 581-95.)
An account of the annual meeting of the British Modern language association, with many of the papers and discussions, is printed in Jour. of educ. (Lond.) Jan. 1904, p. 21-30, and an account of a notable meeting of the same body held in Paris at Easter is in the same journal for May, p. 371-80.

375.88 *Classics in the curriculum*

The papers read at the 10th classical conference of the Michigan schoolmasters' club are printed in the School review for May.

277 **Brereton, Cloudesley.** Greek and the public schools. (Fortn. rev. Mar. 81: 481-88.)

278 ——— New way of teaching classics in Germany. (Educ. rev. Sept. 28: 178-87.)
Postponing Latin and Greek two or three years in the lower schools, and beginning with modern languages.

279 **Clark, E. W.** Greek and Latin in the high schools of Wisconsin. (School rev. May. 12: 399-407.)

280 **Headlam, J. W.** The reform of classical teaching in schools. (In Classical assoc. of Eng. and Wales. Proc. Murray, 2*s.* net. p. 35-43.)
Discussion, 9 p.

281 **Irwin, S. T.** Why we learn Latin and Greek, two addresses to public school boys. O. Constable, 1*s.*

282 **McCrea, N. G.** Latin papers of the college examination board. (Educ. rev. June. 28: 28-37.)
Suggestions for secondary Latin teaching gathered from the reading of 8896 papers submitted in three years for college entrance.

283 **Miller, F. J.** Classical training in a German gymnasium. (School rev. Jan. 12: 97-108.)

284 **Ramsay, G. G.** The classics and popular education, address delivered at the second annual meeting of the Scottish classical association, Dec. 5, 1903. O. MacLehose.

285 **Smith, D. G.** The study of Greek. Parker, 6*d.*
A defense of the requirement of Greek.

286 **Smith, F. W.** Evolution and present status of the beginner's Latin book. (Jour. of ped. Mar. 16: 191-206.)
A study of the material, plan and method of first year Latin as embodied in the average elementary Latin book, both as regards historical development and as concerns its relations and suitableness to modern educational work. A plain statement is given of what seem to the writer the deficiencies in present elementary Latin instruction.

375.9 *History in the curriculum*

See also the number for Jan. 1904 of the Elementary school teacher.

See also no. 34.

287 **The chair** of American history. (Catholic univ. bulletin, July. 10: 371-85.)

Account of the presentation and acceptance of the fund for the chair in American history at the Catholic university. Reprinted from the Columbiad.

288 **Degani, M. A.** Some aspects of Italian education, with special reference to the teaching of history and of the mother-tongue. 60 p. O. Maria Grey training college, 1*s*.

289 **Dodd, W. E.** Some difficulties of the history teacher in the south. (South Atlantic quar. Apr. 3: 117-22.)

A militant public opinion; lack of libraries; few specialists and low pay.

290 **Firth, C. H.** A plea for the historical teaching of history, an inaugural lecture delivered on Nov. 9, 1904. 30 p. O. Clarendon press, 1*s*.

Reviewed by F. J. C. Hearnshaw in School world, Dec. 6:449-50.

291 **New England history teachers' association.** A history syllabus for secondary schools, outlining the four years' course in history recommended by the committee of seven of the American historical association, by a special committee of the New England history teachers' association, Herbert Darling Foster, chairman. 375 p. D. Heath, $1.20.

Contains bibliographies.

CONTENTS.—pt. 1. Ancient history to 800 A. D.—pt. 2. Mediæval and modern European history, 800-1900 A. D.—pt. 3, English history to 1900 A. D.—pt. 4. American history and civil government to 1904 A. D.

Outlines (accompanied with abundant references) have been carefully constructed, so carefully indeed as often to prove a trifle confusing. For immediate practical use in most high schools the syllabus takes for granted specially prepared teachers of history and ample library facilities. Even with these limitations, the syllabus, which, of course, is to supplement, not replace the text-book, is a book which every history teacher in secondary schools should know and use if possible. Several years have been spent by the committee in preparing the outlines and bibliographies, and they have been tested by actual use in several schools before publication.

292 **Pollard, A. F.** The London university and the study of history. (Nat. rev. Dec. 44: 650.)

"Modern history is at present the Cinderella of London university."

Suggestions for the ways and means of a good undergraduate school of history, a graduate school for the same, and a London university press.

293 **Reich, Emil.** General history in secondary schools. (Educ. times, Apr. 57: 158-88.)

293a **Association of history teachers of the middle states and Maryland.** Minutes of the second annual convention. 59 p. O. Knickerbocker press, N. Y. No price.

President's address, L. M. Salmon.

The historical curriculum in colleges, C. H. Haskins.

Report of committee on college entrance requirements in history.

Report of committee on the articulation of work in history in colleges and secondary schools.

375.91 *Geography in the curriculum*

See the files of the Journal of geography; the number for Jan. 1904 of the Elementary school teacher, and the number of Education for Nov. 1904.

376 EDUCATION OF WOMEN

294 **Crawford, M. C.** The college girl of America and the institutions which make her what she is. 313 p. D: L. C. Page, $1.60 net.

Sixteen short chapters on as many of the principal women's colleges, arranged in the order of their enrollment, are followed by two chapters on the leading co-educational colleges.

Each chapter is divided between a short historical account of the founder and founding of the institution and the student life and distinctive customs. There are about fifty very attractive illustrations, though a dozen pictures of girls from different colleges add no value to the book.

295 **Franklin, C. L.** Endowed professorships for women. (Assoc. of collegiate alumnæ. Pub. ser. 3, no. 9. p. 53-61.)

A plea for endowing places for women, to give the young women opportunities.

296 **Gregory, E. H.** College women as teachers in elementary schools. (Assoc. of collegiate alumnæ. Pub. ser. 3, no. 9, p. 15-26.)

The result of an investigation conducted by the Education committee of the Rhode Island branch of the A. C. A. Circular letter replies from 63 superintendents and 25 principals are tabulated.

297 **Kelly, Agnes.** Women's colleges in England. (Educ. rev. Apr. 27: 395-405.)

Their number, names and origin, with some account of the life in them.

298 **Locke, G. H.** Curriculum of a high school for girls in England. School rev. May. 12: 424-25.)

299 **McCracken, Elizabeth.** The woman from the college. (Outlook, Feb. 20. 76: 461-68.)

300 **Smith, T. L.** The Japanese women's university at Tokyo. (Ped. sem. Dec. 11: 484-87.)

301 **Thomas, M. C.** Educated women in the 20th century. (Woman's jour. May 28. 35: 169 and 172-73.)

An address by the President of Bryn Mawr college before the General Federation of Women's Clubs at St. Louis.

376.7 *Co-education*

302 **Libby, M. F.** Co-education and the raw material of the school. (Colorado—University. Investigations of the depts. of psychology and education. v. 2, no. 1, p. 39-42.)

377 RELIGIOUS AND ETHICAL EDUCATION

See also no. 415, no. 430, and no. 447.

303 **Axtell, J. W.** Grading the Sunday school, the outcome of organization. 121 p. D. Cumberland press, 50c.

Short, pithy chapters full of practical, comprehensive suggestions as to underlying principles of grading, and how it may best be done.

304 **Bacon, B. W.** The problem of religious education and the divinity school. (Amer. jour. of theol. Oct. 8: 683-98.)

The need for the formation of the Association for religious and moral education clearly stated. Also the need for the endowment of divinity schools.

305 **Bolton, F. E.** Pedagogical defects of the Sunday school. (Educ. Mar.-Apr. 24: 389-400; 472-84.)

306 **Brown, M. C.** How to plan a lesson, and other talks to Sunday-school teachers. 93 p. D. Revell, 50c.

CONTENTS.—The spiritual thought.—How to plan a lesson.—Lesson planning illustrated.—Notes from child-study.

By the author of Sunday school movements in America.

307 **Coe, G. A.** Education in religion and morals. 434 p. O. Revell, $1.35.

Prof. Coe of Northwestern University is one of the foremost movers in the recent active work in religious education. To all who are interested in how the best of this work is planned and striven for by its leaders this book is an excellent introduction. It emphasizes the serious inefficiency of existing educational agencies, and the immense possibilities of a full development of our state schools and Sunday schools along moral and religious lines.

308 ——— The philosophy of the movement for religious education. (Amer. jour. of theol. Apr. 8: 225-39.)

309 **Dunning, A. E.** The Sunday school as a factor in education. (Educ. rev. Feb. 27: 131-43.)

310 **Greene, S. H.** The twentieth century Sunday school . . . lectures delivered at the Southern Baptist Theological seminary, Louisville, Ky., December 14-18, 1903. 151 p. D. Sunday school board, Southern Baptist convention, 167 N. Cherry St., Nashville, Tenn.. 50c.

311 **Griggs, E. H.** Moral education. 352 p. O. Huebsch. $2.

This book treats of moral education as distinct from religious education, tho devoting a chapter to the relation between the two. The home must or should be the chief agency in moral education, most of which will be indirect thru work, play, government, discipline, example and a correct or healthful atmosphere. The school, however, may give direct ethical instruction—say twenty minutes daily or three times a week—but for the most part the ethical instruction of the school is effected by utilizing ethical values in history, mythology and literature. The work is not a text for children, but is meant as a guide for parents and teachers, a text for college classes studying the subject, and as an effort at a complete and inclusive view of the problem for all who are interested in moral culture. The author does not offer any illustrative material or specific courses of study for the direct ethical instruction suggested in the schools. The book is a notable one, wholesome and readable.

312 **Hall, C. C.** Progress in religious and moral education. (Educ. rev. June. 28: 1-18.)

In this paper read at the Second annual convention of the Religious education association the progress for the past year is recorded. Also found in the Proceedings of the association. 2:86-99.

312a **Hamill, H. M.** Sunday school teacher training. (Reprinted from the Sunday school times). 166 p. D. S. S. Times, 50c.

The training described is that within the church, and carried out under the direction of pastor and superintendent thru Teachers' meetings and

training classes pursuing regular work. A final chapter gives a brief account of some more formal and separate denominational and interdenominational agencies.

313 **Hodge, R. M.** A syllabus of religious education. 31 p. O. Union theol. sem., N. Y., 15c.

A detailed syllabus, with 7 p. bibliography. Dr. Hodge is director of extension courses for lay students at Union theological seminary, and lecturer at Teachers college.

314 **Hubbell, G. A.** Up through childhood: a study of some principles of education in relation to faith and conduct. 303 p. D. Putnam, $1.25.

While the author treats of the aim, institutions and methods of education in general, his chief interest is in moral and religious education and it is the Bible, the Sunday school and the things of the spirit which furnish most of the illustrations and material. The author, who is vice-president of Berea college, has written a thoroly good, sound, helpful book with few references to literature, no theory to exploit, yet much to say of interest to parents and teachers who have or desire high ideals.

315 **King, H. C.** Religious education as conditioned by modern psychology and pedagogy. (In his Personal and ideal elements in education. Macmillan, $1.50 net. p. 105-29.)

316 **McKinney, A. H.** After the primary; what? A manual of methods for the junior department of the Bible-school and for all those who instruct children between nine and twelve years of age, with an introduction by J. B. Shaw. 146 p. O. Revell, 75c. net.

317 **Michael, O. S.** The Sunday school in the development of the American church. 293 p. D. Young churchman co., $1.50.

An attempt to compile from original documents the story of the genesis and evolution of American Sunday school work from the standpoint of the Episcopal church. As emphatic testimony to the value of Sunday schools as propagators of churches the book will be of interest to all religious workers without regard to church affiliation.

318 **Nairn, J. A.** Religious instruction in secondary and technical schools and colleges, a speech delivered at the London diocesan conference Apr. 20, 1904. O. S. P. C. K., *id.*

319 **Pease, G. W.** An outline of a Bible-school curriculum. 418 p. O. Univ. of Chic. press, $1.50.

Statement of a clear, definite course and method of study for every department of the Sunday school. Its educational philosophy is sound, and the book seems entirely practical. All in Sunday school work who wish to increase its usefulness ought to know this book.

320 **Peloubet, F. N.** The front line of the Sunday school movement; the line of the vanguard of Sunday school progress, with a glimpse of ideals beyond. 287 p. D. Wilde, $1.

The results of thirty years' observation of Sunday school work.

321 **Religious education association.** Proceedings of the second annual convention, Philadelphia, Mar. 2-4, 1904. 640 p. O. Rel. educ. assoc., 153 La Salle st., Chicago, $1.

Another valuable volume which with the first one, published last year, constitutes easily the most important, authoritative and comprehensive body of information now in print on this subject. The principal topic at the general sessions was The Bible in practical life, while at each of seventeen department sessions papers were read on a variety of subordinate topics.

322 **Taylor, S. M.** The training of children other than those in elementary schools in matters of religious faith and practice. O. S. P. C. K., *id.*

323 **Udny, S.** Elementary religious instruction; symbolic method. (Contemp. rev. Sept. 86: 418-30.)

324 **Walsh, L. S.** Religious education in the public schools of Massachusetts. (Amer. Cath. quar. rev. Jan. 29: 93-119.)

Historical sketch from 1630, with most space devoted to the period from 1825 to the present. It reviews with special emphasis the work of Horace Mann in Massachusetts. The conclusion is the familiar one that Roman Catholic education is the only moral and religious education offered in this country.

325 **Weisse, H. V.** The religion of the schoolboy. (Contemp. rev. May. 85: 697-706.)

Makes the sweeping charge that in the English public schools "the religion taught to the average boy at the average school is a practically negligible factor in his ordinary life." A reply is found in the July number of the same review on p. 102-06.

326 **What** may the public high school do for the moral and religious training of its pupils? (Nat. conference on secondary educ. p. 144-82.)

Papers and discussion by F. C. Doan; G. A. Coe; M. V. O'Shea; Arnold Tompkins.

327 **Wylie, R. C.** Our training schools for citizenship. (Bibliotheca sacra, July. 61: 466-82.)

An examination of what the author calls the Secular, Roman catholic and Historic American positions regarding the place of the Bible and the teaching of its system of morals in the school. His conclusion is that "all moral and religious instruction cannot be excluded from the schoolroom" and that "there are certain great principles of national religion setting forth the relation of the nation to God, to Jesus Christ and to the Bible which should have a place in every school."

378 HIGHER EDUCATION; COLLEGES AND UNIVERSITIES

See also section 375 for all material relating to special subjects in the college curriculum and 379 for material on the relation of secondary to higher education.

Following this general section the material on higher education in different countries is arranged alphabetically by names of countries.

328 **Briggs, L. R.** Routine and ideals. 232 p. D. Houghton, $1 net.

CONTENTS.—Routine and ideals; a school and college address.—Harvard and the individual.—Address to the school children of Concord.—Commencement address at Wellesley college.—Discipline in school and college.—The mistakes of college life.—Mater fortissima.

These addresses were first printed in as many different and rather inaccessible places. The title essay defends the absolute necessity of a routine in education and the disciplinary advantage of being trained to meet and master hard and even unpleasant work.

There is some of the soundest, sanest and most wholesome counsel for young men, between the covers of this book, that has ever been put in print.

329 **Currell, W. S.** Why do students leave college before graduation? (School rev. Mar. 12: 246-52.)

330 **Dexter, E. G.** The best college: what is it? (Educ. June. 24:603-12.)

A statistical demonstration that it is the small, non-sectarian college for men in the New England town of not more than 30,000 inhabitants.

331 **Hyde, W. D.** The college. (Educ. rev. Dec. 28: 461-77.)

As distinct from the university. Read before the International congress of arts and sciences, St. Louis, Sept. 1904.

332 ——— Place of the college in the social system. (School rev. Dec. 12: 782-97.)

Also in N. E. assoc. of colleges, etc. Addresses, p. 38-54.

An admirable general address. President Hyde emphasizes the necessity of Christianity in the college.

333 **King, H. C.** Personal and ideal elements in education. 277 p. O. Macmillan, $1.50 net.

CONTENTS.—The primacy of the person in college education.—The fundamental nature of religion.—Religious education as conditioned by modern psychology and pedagogy.—Christian training and the revival as methods of converting men: a historical and psychological study.—How to make a rational fight for character.

"In these discussions I express my conviction that college education cannot hope either to retain or regain, as the case may be, its important place in national life, except as it recognizes itself as giving preëminently the supreme training of the entire man for living." Author's preface.

334 **Lord, W. F.** What is a university? (Nineteenth cent. Mar. 55: 467-78.)

335 **Penniman, J. A.** What should be the length of the college course? (In Assoc. of coll., etc., of the middle states, etc. Proc. p. 39-83.)

Discussion by Rush Rhees, A. F. West, J. O. Schurman, J. M. Taylor and others.

336 **Perry, E. D.** Present problems of the university. (Educ. rev. Dec. 28: 478-98.)

Read at the International conference of arts and sciences, St. Louis, Sept. 1904.

337 **Sternburg, Baron von Speck.** American and German university ideals. (Sewanee rev. July. 12: 361-67.)

Commencement address, University of the South.

338 **Thwing, C. F.** College training and the business man. 143 p. O. Appleton, $1 net.

The purpose of this book is to present the advantage that three essentially commercial vocations—banking, transportation and insurance—and that general business administration also, may receive from the college. There is a great deal of first hand testimony from presidents of banks, railroads and insurance companies as to their experience with college trained employees.

339 **Trinity** college (Durham, N. C.) and academic liberty. (South Atlantic quar. Jan. 3: 62-72.)

The statement of the trustees, memorial from the faculty and editorial article from the student paper, all relating to action on the resignation of Dr. J. S. Bassett.

Higher education in France

340 **Geddes, J.** Educational advantages for American students in France. 23 p. O.

Reprinted from Bostonia. A useful summary.

Higher education in Germany

341 **Wright, C. E.** Thirty years' growth of German universities. (Educ. rev. Jan. 27: 66-74.)

A presentation and discussion of statistics of attendance, including the universities, technical high-schools and schools and colleges of forestry, mining, agriculture and veterinary science. In the same number of the Educ. rev. on page 107 are printed the latest attendance figures (1903) in detail by institutions and faculties.

Great Britain

342 **Blennerhassett, R.** University education in Ireland. (Nineteenth cent. Apr. 55: 607-17.)

343 **Delany, W.** Irish university education; a plea for fair play. O. Murray, *6d.* net.

344 **Hutton, Laurence.** Literary landmarks of the Scottish universities. 200 p. O. Putnam, $1.25 net.

Edinburgh, Glasgow, Aberdeen, St. Andrews.

345 **State** support for universities in England. (Educ. rev. Sept. 28: 208-16.)

346 *Cambridge.* **Caius, John.** The annals of Gonville and Caius college, ed. by John Venn. 43 p. Q. Deighton, 15*s.* (Cambridge antiquarian society. Publications: octavo series, no. xl.)

347 —— **Clarke, J. W.** Endowments of the University of Cambridge. 692 p. O. Camb. univ. press, 10*s.* 6*d.* net.

348 —— **Purnell, E. K.** Magdalene college. 215 p. O. Robinson, 5*s.* net. (College histories.)

349 —— **Shuckburgh, E. S.** Emmanuel college. 259 p. O. Robinson, 5*s.* net. (College histories.)

350 *Durham.* **Fowler, J. T.** Durham University, earlier foundations and present colleges. 324 p. O. Robinson, 5*s.* net. (College histories.)

351 *Oxford.* **Cuddesdon** college, 1854-1904, a record and memorial. 146 p. O. Longmans, $1.25.

Sketches of life at Cuddesdon theological college, Oxford, by different clergymen who have been connected with it.

352 —— **Cummings, Hayman.** The college stamps of Oxford and Cambridge, a study of their history and use from 1870 to 1886. 122 p. O. Simpkins, 3*s.* 6*d.* net.

353 —— **Fowler, Warde.** An Oxford correspondence of 1903. Blackwell, 2*s.* 6*d.* net.

A discussion of the modern vs. the classical question at Oxford.

354 —— **Gunther, R. T.** A history of the Daubenny laboratory, Magdalen college, Oxford. O. Clarendon press, 5*s.* net.

355 —— **Headlam, Cecil.** Oxford and its story. 380 p. Q. Dent, 21*s.* net.

Illustrations, some in color.

356 —— **Ronaldson, J. M.** Drawings of Trinity college, Oxford, with a short history of the college by J. W. More. 27+20 p. O. Holywell press.

357 *Trinity.* **Mahaffy, J. P.** An epoch in Irish history; Trinity College, Dublin, its foundation and early fortunes, 1591-1660. 406 p. O. Unwin, 16*s*.
Reviewed in the Athenæum Mar. 5. p. 295.

358 ——— **Morris, W. O'C.** Irish university commission and its report. (Fortn. rev. Jan. 81: 1-16.)
Bears chiefly on the history of Trinity college.

359 ——— **Particular** book of Trinity college, Dublin, with an introd. by J. P. Mahaffy. Q. Unwin, 63*s*. net.

Greece

360 **Thwing, C. F.** University of Athens. (Harper, Feb. 108: 438-43.)

Japan

361 **Yatsu, Naohide.** Imperial University of Tokyo. (Pop. sci. mo. Mar. 64: 466-73.)

United States

See also 376, Education of women. Full statistical information about the colleges and universities of the country is given each year in v. 2 of the Report of the U. S. Comm'r of education.

362 **The American** college course from the point of view of a recent graduate.
Keyes, H. E.—Dartmouth, 1900. Educ. rev. Jan. 27: 60-65.
Overstreet, H. A.—California, 1899. Educ. rev. Feb. 27: 168-78.
Walsh, W. F.—Williams, 1898. Educ. rev. March. 27: 279-92.
Wright, H. B.—Yale, 1898. Educ. rev. April. 27: 384-94.
Coffin, H. A.—Brown, 1901. Educ. rev. May. 27: 497-509.
These significant papers continue those mentioned in item no. 333 of this bibliography for last year.

363 **Andrews, E. B.** Eastern universities and western. (Independent, Sept. 57: 673-76.)

364 **Barrows, M. E.** The state university. (Dial, Mar. 1. 36: 137-42.)

365 **Draper, A. S.** Government in American universities. (Educ. rev. Oct. 28: 228-39.)

366 ——— University questions concerning the common schools. (Educ. rev. Feb. 27: 109-30.)
Length of courses in universities and schools; effect of university teaching on secondary teaching; moral effect of universities.

367 **Harper, W. R.** Higher education in the west. (North Amer. rev., Oct. 179: 584-90.)

368 **James E. J.** The relation of the church to higher education in the U. S. (In N. E. A. Proc. p. 68-83.)
Not so much historical as dealing with present position, influence and policies of church colleges.

369 **Knapp, E. A.** Why does the small college remain small? (Educ. rev. Jan. 27: 75-82.)

370 **Matthews, Brander.** Problem of the American college. (Bookman, May. 19: 291-97.)
The four year course and relative values of the A. B. degree.

371 **Russell, I. C.** Research in state universities. (Science, June 3. 19: 841-54.)

Outlines the scope, nature, and methods of real university work. Originally printed in the University of Michigan bulletin. New ser. v. 5, no. 5.

372 **Stevenson, J. J.** The college course. (Pop. sci. mo., Jan. 64: 202-09.)

373 ——— Status of American college professors. (Pop. sci. mo., Dec. 66: 122-30.)

374 **Thwing, C. F.** Higher education of the central west. (Internat. quar. June. 9: 382-93.)

375 *Carleton College.* **Leonard, D. L.** The history of Carleton college; its origin and growth, environment and builders. 421 p. D. Revell, $1.50.

A history of the Congregational state college of Minnesota, especially full for the earlier period before 1880.

376 *Chicago University.* **Flint-Nott.** The University of Chicago; a sketch. D. 40 p. Univ. of Chic. press, 25c.

377 ——— **Chicago** University. The president's report: administration. 574 p. Q. Univ. of Chic. press. (Decennial publications, Ser. 1, vol. 1.)

Reports of president, deans, directors laboratories 1892-1902 with an historical sketch on p. 493-574.

378 *Cincinnati University.* **The University** of Cincinnati and its presidency. (Science, Apr. 22. 19: 661-67.)

An interesting chapter in the history of university government. Takes the side of President Ayres, but not in an offensively partisan way.

379 *Columbia University.* **A history** of Columbia University, 1754-1904; published in commemoration of the one hundred and fiftieth anniversary of the founding of King's college. 493 p. O. Macmillan, $2.50 net.

Contents.—book 1. King's college and Columbia college, by J. H. Van Amringe.—book 2. The university and the non-professional graduate schools, by M. Smith.—book 3. The professional schools. 1. The school of medicine (College of physicians and surgeons), by F. S. Lee. 11. The school of law, by F. M. Burdick. 111. The school of mines and associated schools, by H. S. Munroe. 1v. The school of architecture, by A. D. F. Hamlin.—book 4. The affiliated colleges: 1. Barnard college, by W. P. Trent. 11. Teachers college, by F. T. Baker. 111. The college of pharmacy, by H. H. Rusby.—book 5. The library, by J. H. Canfield.

380 *Indiana University.* **Indiana** university 1820-1904; historical sketch; development of the course of instruction; bibliography. 348 p. O. Univ. press. No price.

Volume prepared as the exhibit of Indiana university at St. Louis. The subject matter is dignified, the pictures are many, clear and interesting, the book a creditable contribution to the history of the institution.

381 *Pennsylvania University.* **Thorpe, F. N.** William Pepper (1849-98) provost of the University of Pennsylvania. 555 p. O. Lippincott, $3.50.

Over 200 pages treat of University history, not only during Dr. Pepper's provostship but before.

382 *Washington University.* **Pettus, C. P.** History of Washington university. (Pop. sci. mo. Feb. 355-68.)
With pictures of the new buildings.

378.01 *College entrance requirements*

383 **Beers, H. A.** College entrance requirements in English. (In his Points at issue. Macmillan, $1.50 net. p. 3-32.)
Reprinted from Educ. rev., May, 1892. Tells why Yale, at that time, required no entrance examination in English. This particular state of affairs no longer exists, but the paper is reprinted as of interest to the still mooted question of College entrance English.

384 **Bouton, Eugene.** High school English with special reference to college entrance requirements. (Educ. Sept. 25: 36-44.)

385 **Brown, J. F.** What is the effect of the system of accrediting schools by the universities upon the high school and its development? (School rev. Apr. 12: 299-307.)
The writer bases his statements largely on experience for two years as inspector of schools for the State university of Iowa, and he believes the system is beneficial.

386 **College entrance examination board.** Fourth annual report. (Educ. rev. Oct. 28: 265-203.)
May be had separately from the secretary T. F. Fiske, Substation 84, New York City, no charge. The work of the board shows steady growth from year to year. Changes in its constitution mark it as national rather than local. The usual detailed administrative data are given. The report is reviewed and its important statistics reprinted in the School rev. Nov. 12: 747-50.

387 **Eliot, C. W.** What has been gained in uniformity of college admission requirements in the past twenty years? (School rev. Dec. 12: 757-69.)
Also in N. E. assoc. of colleges, etc. Addresses, p. 6-17, followed by 21 p. of interesting discussion.
President Eliot feels that the College entrance examination board and its sister boards and commissions have practically solved the problem of standards.

388 **Flexner, Abraham.** The preparatory school. (Atlantic, Sept. 94: 368-77.)
The author charges an inevitable narrowness of aim (in fitting for college) and consequently of method; also that the preparatory school does not handle its material vitally.

389 **North central association of colleges and secondary schools.** Report of the commission on accredited schools. (In Proc. of 9th annual meeting, p. 43-68.)
The report of this commission from year to year is of special interest as an account of the progress of the co-operative work in inspection and accrediting of high schools for college entrance purposes. A list of accredited high schools in ten western states is printed.

390 **Seely, C. D.** Admission to college by examination. (In N. Y. state—Assoc. academic principals. Proc. p. 322-38.)
17 p. discussion for and against certificate admission.

391 **Thomas, Isaac.** The new England entrance certificate board from the standpoint of the schools. (School rev. Nov. 12: 696-705.)
Gives the history of a significant step away from college entrance by examination only.

392 **What** is the effect of the system of accrediting schools by the universities upon the high school and its development? (Nat. conference on secondary educ., p. 91-110.)

Papers by E. G. Dexter, J. F. Brown and H. A. Hollister, followed by general discussion.

378.2 *Academic degrees*

393 **MacDougall, Robert.** University training and the doctoral degree. (Educ. Jan. 24: 261-76.)

What are legitimate requirements in graduate work?

394 **Perry, E. D.** The degree of doctor of philosophy in the U. S. (Educ. rev. Sept. 28: 164-77.)

A history of its establishment and growth. Also in Columbia univ. quarterly, June. 6: 255-67.

379 PUBLIC SECONDARY EDUCATION. THE STATE AND EDUCATION

See also 372 for elementary education and 373 for private schools.

395 **Brubacher, A. R.** Some readjustments in secondary education. (Educ. June. 24: 613-20.)

396 **Buttrick, H. E.** True function of the evening high school. (School rev. Sept. 12: 588-603.)

397 **Chubb, Percival.** The function of the festival in school life. (Elem. school teacher, Apr. 4: 559-65.)

In the Mar. number James Hall has an article on Art at school festivals. The two together are a valuable contribution on a subject little written of.

398 **Halleck, R. P.** Enlargement of the secondary field. (School rev. Feb. 12: 162-69.)

399 **Hanus, P. H.** A modern school. 306 p. O. Macmillan, $1.25 net.

This is not a new book, but a collection of nine educational essays, seven of which have appeared in almost their present form as magazine articles from 1899 to 1903, and have been noted in this bibliography as they appeared. They are here whipped into a doubtful unity by giving to the collection the title of the first chapter and by an ingenious but unconvincing prefatory argument. While several of the chapters treat but indirectly of the title theme, all of them are extremely practical interpretations of current educational tendencies, and suggestive contributions to such present problems as The elective system, Relations between home and school, Training of teachers. The volume may be said to develop on the practical side the ideas in the author's *Educational aims and educational values,* often indeed quoting the earlier volume verbatim.

400 **Jordan, D. S.** High school of the twentieth century. (School rev. Sept. 12: 545-49.)

401 **Maxwell, W. H.** Present problems of the school. (Educ. rev. Nov. 28: 378-95.)

Discussion of the separate functions and the relations between state and school. Read at International congress of arts and sciences, St. Louis, Sept. 1904.

402 **Sadler, M. E.** The school in its relation to social organization. (Educ. rev. Nov. 28: 361-77.)

Read at International congress of arts and sciences, St. Louis, Sept. 1904.

403 **Smith, F. W.** The high school and the adolescent-physical relations. (Jour. of ped. Dec. 17: 114-31.)

This article tries to show that the physical life of the high school student contains more factors and is dependent on more conditions than is ordinarily held. It emphasizes physical and psychical correlations. School ideals, courses of study, particularly the character of the content of studies, methods of teaching and government, and opportunities for expression and application in community life have quite as much to do with physical as with intellectual health. While emphasizing this side of the question the writer at the same time recognizes the value of direct physical opportunities. Wise guidance is dependent on the psychology of adolescence, the typical characteristics of which are given as a basis for the discussion.

404 **Tupper, F. A.** Educational broth. 211 p. D. Bardeen, $1.50.

Brief papers by the Head-master of the Brighton (Mass.) high school on The marking system nightmare; Spelling; Latin as the universal language; Teachers' salaries; Diplomas; School magazine club; Debating in secondary schools; Courtesy in high schools, etc.

405 **Wilson, R. K.** State education and militarism. (Westminster rev. Apr. 161:386-400.)

Tries to establish between them a connection similar to that between a State church and militarism.

406 **Woolsey, C. H.** The lack of connection between the work of the grammar and high school. (In N. Y. (state) University. 42d convocation, p. 308-20.)

The paper is based on the answers to a circular letter sent far and wide to high school principals.

379.14 *School laws*

407 **Parsons, J. R.** Tendencies in school legislation in 1903. (Educ. rev. June. 28: 19-27.)

379.15 *School supervision*

408 **Cloyd, D. E.** Economics of city school administration. (Educ. Dec. 25: 193-206.)

409 **Chancellor, W. E.** Our schools; their administration and supervision. 434 p. D. Heath, $1.50.

Not at all theoretical, but a collection of a great body of material on the practical work of administering and managing (but not teaching) our schools. The sixteen chapters are all reprinted from ten journals, but they form a unified and symmetrical book which is reviewed at length in Educ. rev. Feb. 1905, 29: 195-98 and there criticised for omission or slight treatment of the topics Political control; The school plant and its sanitation; Special schools; Discipline, Grading and promotion. Numerous appendixes print forms for blanks, rules and forms used in school administration.

410 **Draper, A. S.** The supervision of country schools. 43 p. D. Bardeen, 50c.

An address delivered Nov. 21, 1904, before the Association of school commissioners and superintendents of N. Y. state.

411 **Rice, J. M.** Need of a new basis in supervision. (Forum, Apr. 35: 590-609.)

379.5 *Secondary education in special countries*

Australia

412 **Frodsham, G. H.** Primary education in Australia. (Nineteenth cent. Feb. 55: 219-28.)

Germany

413 **Brereton, Cloudesley.** A look round German schools. (Jour. of educ. (Lond.) Apr. p. 274-76.)

414 **Lexis, W. H.** A general view of the history and organization of public education in the German empire; tr. from the German by G. J. Tamson. 182 p. O. Asher (Berlin) 3.50 marks.

From "Das unterrichtswesen im Deutschen Reich," Berlin, 1904, comp. by W. Lexis and others for the St. Louis exposition. Issued only in English.

415 **Thiergen, Oscar.** The plans of instruction for the German middle-class schools and the regulations of the government. (School rev. Oct. 625-30.)

Shows total number of recitation hours devoted to each subject in the four kinds of secondary schools, with special description of and comment on the place of religious instruction.

416 **Winch, W. H.** Notes on German schools; with special relation to curriculum and methods of teaching. 264 p. D. Longmans, $1.50.

Not a treatise on German education as a whole, but confined mainly to the primary, middle and a section of secondary schools in which modern languages and science take a prominent place; a painstaking attempt to apprehend a complicated system and make it clear to others.

Lessons heard during the author's visit are reproduced, and many little matters are set down which would be omitted in a more formal treatise, but which are useful as revealing the exact state of affairs.

Great Britain

Great Britain publishes many valuable documents on education at home and in the colonies. List may be had on application to Eyre and Spottiswoode, London.

The great "public schools" for boys are under 373.

There is still a mass of writing on the English education bill of 1902, in the periodicals, in the public press, in pamphlets and in books.

Among the books giving the Education acts are one edited by G. R. S. Taylor, Routledge, 1*s.*; one by T. E. Heller, Bemrose, 8*d.* net; one by W. H. Doomsday and H. B. N. Mothersole. The law of education, Hadden, 42*s.*; and one by G. E. Jones and J. C. G. Sykes, The law of public education in England and Wales. Rivingtons, 21*s.* net.

417 **Edwards, A. G.** Educational concordats. (Nineteenth cent. Jan. 55: 40-46.)

Replied to by Hughes, no. 419.

418 ——— The educational crisis in Wales. (Nat. rev. Dec. 44: 642-49.)

A strong statement of the churchmen's opposition to the Education act, by the bishop of St. Asaph.

419 **Hughes, John.** Proposed educational concordat. (Nineteenth cent. Mar. 55: 387-401.)

Answers no. 417.

420 **Humberstone, T. L.** Notes on the new regulations for secondary schools. (Jour. of educ. (Lond.) Sept. p. 605-08.)

421 **Hutchinson, A. F.** History of the high school of Stirling, with notices of schools and education in the burgh generally. 326 p. O. Mackay, Stirling, 21*s*.

Admirably done. The account of old customs is entertaining. Includes a memoir of Hutchinson by J. M. Robertson.

422 **Lathbury, D. C.** Educational conciliation. (Nineteenth cent. July. 56: 67-74.)

423 ——— How long will the education act last? (Nineteenth cent. Jan. 55: 47-59.)

Answered in no. 419.

424 **London** education act, 1903; how to make the best of it. O. Fabian society. 1*d*. (Fabian tract, 117.)

425 **McDermot, George.** Irish Catholics, English dissenters and the education act. (Amer. Cath. quar. rev. Oct. 29: 728-42.)

A full statement of a Roman Catholic point of view so strong that at times it becomes violent.

426 **Macnamara, T. J.** The problem of Irish education. (Contemp. rev. Oct. 86: 473-84.)

The Irish educational problem is not the University education, but elementary and secondary education.

427 **Millard, F. L. H.** A short history of elementary education in England. O. S. P. C. K., 3*d*.

428 **Moore, H. K.** An unwritten chapter in the history of education; being the history of the Society for the education of the poor of Ireland, generally known as the Kildare place Society, 1811-31. 350 p. D. Macmillan, $2.50.

429 **Pellatt, T.** Public schools and public opinion; apology for certain methods in English higher education. 136 p. D. Longmans, $1, 2*s*. 6*d*. net.

The author trains little boys for the English public schools. The book is reviewed rather unfavorably in the Journal of education (Lond.) for Mar.

430 **Philpott, H. B.** London at school; the story of the school board. 1870-1904. 314 p. il., O. Unwin, 6*s*.

Fuller than Spaulding's Work of the London school board, and excellently done. The question of religious instruction is admirably set forth.

431 **Pryce, R.** The working of the education act, 1902, its failure and its future. O. Western Mail, Cardiff, 4*d*.

432 **Sadler, M. E.** Report on secondary education in Liverpool; including the training of teachers for public elementary schools. 230 p. O. Eyre.

This is a full report by an expert, and at the instance of the school authorities, upon the condition of secondary education in a great commercial city. Weaknesses in the administration touching funds, quality of teachers and the number of pupils who leave early are pointed out, and some definite suggestions for improvement are made. Liverpool school committees should profit greatly by such a plain and authoritative report.

433 **Salmon, David, and Hindshaw, Winifred.** Infant schools; their history and theory. 324 p. D. Longmans, $1.50 net.

For extended note see no. 176.

434 **Sanday, William.** Justice in education; a word for peace. 332 p. O. Longmans, 40c.

A Church of England contribution to the fierce education controversy stirred by the act of 1902.

435 **Twenty** five years of education in England. (Jour. of educ. (Lond.) Jan. p. 77-98.)

A symposium in commemoration of the 25th anniversary of this journal. Secondary school topics are treated almost exclusively.

436 **What** shall I do with my son? or, Some defects in our present system of secondary education, by Praeceptor Londinensis. O. Broad, Richmond, 6d.

Italy

437 **M., J. W.** Popular education in Italy. (Nation, Aug 4. 79: 97-98.)

Outlines the provisions of a new bill for elementary education signed by the king in June, 1904.

Spain

438 **Unamuno, M. de.** National and clerical education in Spain. (Independent, Aug. 25. 57: 427-30.)

United States

Matter on education in separate states is arranged alphabetically under states at the end of this general section.

439 **Brooks, E. C.** Rural public high schools in the south. (School rev. Feb. 12: 148-61.)

See also Proc. of the 14th annual meeting of the Southern educ. assoc. p. 110-17 and 167-73.

440 **Crowley, J. J.** The parochial school, a curse to the church, a menace to the nation; and exposé of the parochial school . . . the loss of thirty million Catholics in the United States, etc. 415 p. O. The author, Sherman House, Chicago, $1.

A venomous, scathing, bitter, absolutely frank but needlessly lurid and sensational arraignment of the Roman Catholic parochial school by a Roman Catholic priest. The book gives an appalling account of priestly graft, immorality and sacrilege among superintendents and principals of parochial schools, and tries to show that the Catholic hierarchy is bent upon destroying the American public school. The same evidence and information could have been made just as effective if presented in better taste and temper.

441 **Draper, A. S.** Universities and the common schools. (Educ. rev. Feb. 27: 109-30.)

An address before the Illinois state teachers' association. Discusses length of courses in Universities and schools; effect of university teaching on secondary teaching; moral influences of the universities on high schools.

442 **Goodnow, F. J.** School administration. (In his City government in the U. S. Century, $1.25 net, p. 262-73.)

A brief, accurate, but unimportant statement of existing conditions.

443 **Few, W. P.** Some educational needs of the south. (South Atlantic quar. July. 3: 201-11.)

Primary education for all; Industrial education and manual training in its place and without undue exaggeration; High grade colleges.

444 **Harris, W. T.** High school system in the Southern states. Educ. rev. Mar. 27: 259-69.)

Its development since 1850 and a study of its influence. For much valuable material on education in the Southern states see the annual volumes of the Southern educational association and the Association of colleges and preparatory schools of the southern states.

445 **Hervey, W. L.** How the American boy is educated. (Chautauquan, Sept.-Dec. 40: 78-84; 165-72; 263-70; 359-65.)

The first four in a series of nine articles.

446 **Mosely educational commission to the United States of America.** Reports. 400 p. O. Co-operative printing co. lim. Tudor street, E. C., London, 1*s*.

Observation of the energy and efficiency of American engineers in South African mines first gave Mr. Mosely the thought of studying American education to see "what sort of country it was that was responsible for sending so many level headed men to the Cape."

This commission of 26 English educators spent ten weeks here with the specific object of determining the effect and influence of education upon our industrial progress. The educational eminence of the visitors, the exceptional opportunities afforded them and the extremely practical trend of their observations combine to make their report a very notable educational document, a mass of acute remarks, critical suggestions, appreciation and disagreement all in excellent tone and temper. The report is reviewed at length in Educational review Sept. 1904. 28: 109-29 and an English estimate of it appears in the Journal of education (London) May 1904. 35: 343-45. Prof. R. M. Wenley of the University of Michigan contributes a valuable review of the Report to the Journal of Pedagogy. Dec. 1904, 17: 132-59; in School for Jan. 1904, 1: 12-14 Mr. T. L. Papillon, one of the commissioners, writes of his personal impressions; Mr. O. H. Lang in the Forum, July-Sept. 1904, 36: 85-95 discusses the report.

447 **National conference on secondary education and its problems.** National conference on secondary education and its problems, held at Northwestern university, October 30 and 31, 1903. Stenographic report of the proceedings. 240 p. O. Northwestern University.

The following five topics were discussed.

1—Place and function of the endowed academy and the private high school.
2—True function of the free public high school.
3—The system of accrediting schools.
4—Moral and religious training in the public high school.
5—Serious defects in our high school system.

The conference, its work and discussions furnish the text for an interesting editorial in the Dial for Aug. 16, 1904, 37: 77-79.

448 **Shaw, A. M.** Common sense country schools. (World's work, June. 8: 4883-94.)

Describes the consolidated rural schools of Winnebago Co,, Illinois, with plan of model school grounds.

449 ——— Backward country schools near big cities. (World's work. Sept. 8: 5244-54.)

Urges that pupils in inefficient, ill equipped country schools should be transported to city schools.

450 **Stokes, J. G. P.** Public schools as social centres. (Annals of Amer. acad. May. 23: 457-63.)

451 **Wendell, Barrett.** Our national superstition. (North Amer. rev. Sept. 179: 388-401.)

Some doubts concerning the new education and its results during the past twenty years.

California

452 **California—Public instruction, Sup't of.** Twenty-first biennial report. 272 p. O.

Contrary to custom this report is included here, because it contains the following excellent monographs prepared for the Louisiana purchase exposition and which constitute valuable contributions to the educational history of the state. The monographs are also printed separately.

Van Liew—The California state normal schools.

Swett—The elementary schools of California.

McChesney—Secondary education in California.

Georgia

453 **Bacon, M. A.** Massachusetts model school in Georgia. New Eng. mag. Apr. n. s. 30: 131-37.)

A school founded in 1903 by Mrs. Granger in Bartow Co., and maintained by the Mass. Federation of women's clubs.

454 **Berry, M.** Uplifting backwoods boys in Georgia. (World's work. July. 8: 4986-92.)

Indiana

455 **Cotton, F. A.** Township high schools in Indiana. (School rev. Apr. 12: 266-80.

Brief sketch of enabling legislation; pictures and plans of two or three and some recent data about them.

456 **Indiana.—Public instruction, Dept. of.** Education in Indiana. An outline of the growth of the common school system, together with statements relating to the condition of secondary and higher education in the state and a brief history of the educational exhibit. Prepared for the Louisiana purchase exposition by F. A. Cotton, state superintendent of public instruction. 640 p. O. Indiana. No price.

Kansas

457 **Hunter, S. J.** Mean proportional in state education. (Educ. Apr. 24: 485-95.)

The county high school in Kansas.

Massachusetts

458 **Ernst, G. A. O.** Movement for school reform in Boston. (Educ. rev. Dec. 28: 433-43.)

An account of incidents in Boston school board history for the past eight or ten years, and which ended in the resignation of Supt. Seaver.

459 **Littlefield, G. E.** Early schools and school books of New England. 354 p. O. Club of odd volumes.

Limited to one hundred and sixty-seven copies.

"Mainly a description of the various text-books in copies of which he has found evidence that they had been used by children who in later years did their part toward developing in eastern Massachusetts what Dr. Crothers calls its 'deeply rooted prejudice in favor of intelligence.' For nearly forty years Mr. Littlefield's bookshop on Cornhill has been the haunt of Bostonians who care for the history of their town, and into it have come the attic clearings of a thousand-odd New England housewives. . . . While searching through these . . . Mr. Littlefield long ago realized

that the schoolbooks which his fellow bookmen regarded as junk had an importance of their own. . . . They were the conclusive evidence of how New England got its education. . . . He began to collect these tattered and torn remains of schoolboy struggles, to look into them for the dates which show when the owners of the scrawling signatures were using the books, and to search for other evidence which would prove when the popular text books were first brought over from England, how long and how extensively they were used, and what influence they had upon the curriculum and the pupils. These gatherings give a very unusual value to the volume in which they are brought together." Nation, Mar. 31, p. 251.

Michigan

460 **Putnam, Daniel.** The development of primary and secondary public education in Michigan, a historical sketch. 273 p. D. G. Wahr, $1.

"To supply the lack of any connected history the author has drawn upon reports and kindred documents for his material as well as upon his personal experience in educational work of over half a century." Publisher's weekly.

New York

461 **Fitch, C. E.** The public school history of common school education in New York from 1633 to 1904. 124 p. O. Dep't of education, Alb.

After forty pages devoted to school development before 1854, the rest of the pamphlet is a history of the Department of public instruction and its work, to which are appended portraits and brief biographical sketches of the various state superintendents.

462 **Jewett, F. R.** Public school system of Buffalo, N. Y. (Educ. June. 24: 596-602.)

463 *Long Island.* **Thiry, J. H.** History of the early schools in Long Island, followed by History of the High school in Long Island City. 23 p. O. North side news, book and job print.

464 *New York City.* **Goodwin, E. J.** Characteristics of the N. Y. city high schools. (Educ. rev. Oct. 28: 255-64.)

Deals entirely with their present organization, administration, and superintendence.

465 ——— **Williams, A. S.** New York's school problem. (Educ. rev. Apr. 27: 325-37.)

Pennsylvania

466 **Fleming, G. T.** My high school days, including a brief history of the Pittsburgh Central high school from 1855 to 1871, and addenda. 257 p. O. Johnston, Pittsburgh.

AUTHOR INDEX

The numbers refer to item, not to page. Anonymous books and articles, and periodical titles, are not entered, but entries are made for authors of reviews and for the names of persons about whom articles or books are written. For subject arrangement see scheme of classification at the beginning.

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V

DISCUSSIONS

EXPERIMENTAL WORK IN HIGH-SCHOOL PHYSICS

I wish to comment on two or three passages in the brief article by Professor Stevens, which was printed in the April, 1905, number of the REVIEW, under the title given above.

"Notebooks are found to be filled with measurement after measurement of a table-top by many methods, by every student in the class." Now I cannot say that I am familiar with such notebooks, tho I have seen many instances of what seems to me an abuse of the quantitative method of study. It is largely because some teachers [1] will run into such extravagancies, and other extravagancies of a different sort, that I, as an examiner for admission to college, have always felt the need of some degree of prescription as to the kind of laboratory work which may be offered by candidates for admission. I am well aware of the fact that many people suppose the influence of college men to be exerted in favor of such work as Professor Stevens here objects to; but I am confident that an intelligent reading of the requirement in physics adopted by the National Educational Association, or of that adopted by the College Entrance Examination Board, will show no warrant for such an opinion. The extended statement of the requirement in physics for admission to Harvard College says, to be sure, "A course of study dealing with the leading elementary facts and principles of physics, with *quantitative* laboratory work by the pupil;" but it says further, "The pupil's laboratory work should give practice in the observation and explanation of physical phenomena, some familiarity with

[1] One of the bitterest opponents the Harvard influence in physics teaching ever had was a man who declared that the teaching of physics was entirely for the purpose of disciplining the pupil, and who kept his boys engaged for a year in painstaking measurements without giving them one laboratory exercise in heat, light, electricity, or magnetism.

methods of measurement, and some training of the hand and the eye in the direction of precision and skill. It should also be regarded as a means of fixing in the mind of the pupil a considerable variety of facts and principles."

For myself, tho I have said from the beginning, and still say, that the greater part of any practicable laboratory course for large numbers of school pupils must be quantitative, I have never said, and I have never thought, that precision of measurement should be the chief object of such a course. There are many experiments which I consider highly profitable to school pupils, in which, with the apparatus that I recommend for school use, errors of two, three, even five or ten per cent., are allowable, if not unavoidable.

Having now expressed agreement with Professor Stevens in some measure, I must quote from him one passage which seems to me to have been written without due consideration. "Boyle's law is not a proper subject for quantitative determination until the student has had enough of analytic geometry to know what an equilateral hyperbola is." Now, what is Boyle's law? Merely this: If the pressure of a given quantity of gas is doubled, the temperature remaining constant, the volume is reduced to one-half; if the pressure is trebled, the volume is reduced to one-third, etc. The proposition which I have quoted from Professor Stevens amounts to a declaration that one cannot understand this law without having studied analytic geometry.

It is, of course, true that Boyle's law is in some respects more vividly realized if it is expressed by means of a curve, in which horizontal distances represent volumes and vertical distances represent pressures; but it is quite practicable, even for a schoolboy, to plot such a curve without having heard of analytic geometry. After he has plotted it, the teacher can, if he thinks it worth while, tell the boy that this simple curve is called by the learned a rectangular hyperbola. The boy will doubtless be amused, and, if he ever enters the field of formal analytic geometry, he will have the advantage of finding an old acquaintance there.

This is a good example of the numerous class of cases in which the study of physics may become an aid to the study of

mathematics, a possibility which school teachers of mathematics are beginning to recognize and develop.

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"THE CONCEPT OF ADJUSTMENT AS APPLIED TO EDUCATION"

Students of education, working in the spirit of contemporary scientific method, can hardly fail to enjoy Mr. Colvin's discussion in the May EDUCATIONAL REVIEW, though I think some, at least, will not be likely to agree with him fully in several of his propositions; and the first, that "a favorite description of the nature of education now current is, that it is adaptation, or adjustment, to environment." It would have been illuminating if Mr. Colvin had mentioned the current educational literature, in which the conception of adjustment, in its evolutionary significance, is so much as alluded to even. I venture the opinion that, in comparison with the total amount of present-day educational writing, that impregnated with the view of adjustment is, in the matter of quantity, exceedingly slight. The presses are burdened with books and articles on the theory and practice of teaching; but among all these one must search long and carefully for the occasional one written from the standpoint of modern biological and evolutionary science. We still hear much, very much, respecting the aim of *discipline* in education, and *culture,* and *all-round development,* and *earning one's daily bread,* and the *acquisition of knowledge;* but when one talks of *Adjustment* to the average educational audience, he speaks in an unfamiliar tongue, and, really, his is still a lone voice crying in the wilderness.

It would have been well, too, if Mr. Colvin had indicated in precisely what sense the term Adjustment is employed, by those who advocate it, as a comprehensive and effective guiding principle in education. He assumes that it is used in the narrow sense of adaptation to an *immediate* environment, which is regarded as unmodifiable and permanent in its existent forms. It is thus implied that the individual must fit himself to things as they are, without being able to, in any way, remodel or reconstruct them so as the better to adapt them to his needs. Such a

conception makes the individual slavishly submissive to environmental conditions; he is the creature of forces which he must obey, but which he cannot in any manner control. He must do their bidding; they will not do his. Everyone, as a mere matter of impulse, if not more, will protest against such a view of human life. Then, experience denies it, and ethical sentiment condemns it. But who puts forward any such a conception of adjustment in human life, or acts as its exponent in education? Certainly no psychologist can be accused of it. And I have searched in vain for educators who have taken this view. So far as I can discover, they all recognize as a very simple principle, that man, to a greater or less extent, remodels his environment by correlating natural forces so as to produce effects which nature does not spontaneously originate. Adjustment thus denotes initiative or creative, rather than mere conformative or imitative activity. Surely, this is taken for granted, if not explicitly stated, by evolutionary writers on education. Not even the biologist uses the term Adjustment with the limited meaning which Mr. Colvin ascribes to it, for he realizes that the bird, for instance, builds its nest, the beaver his hut; and all the higher animals, at any rate, make some improvements upon nature as they find it, locally and momentarily. Man is not separated *in toto* from all other living things in his creative tendencies and powers, as Mr. Colvin seems to think (p. 513); he simply exhibits these in an exceedingly marked and complex form, as compared with other sentient beings.

It has, in all times and places, been a comfort to civilized man to think that he could transcend his immediate environment, and strive toward an "ideal" life. He has been accustomed to motivate himself to strenuous endeavor, by declaring that the ends worth attaining have ethical values, and originate within, and not in the environment. "It is what man wants to be, and not what the world about him really is," that has been chiefly emphasized in religious, ethical, and educational theory. This is, and has been, the popular attitude, and Mr. Colvin adopts it as a scientist, failing to inquire whether what man wants to be is not, after all, determined at every point by what actually exists. He conceives of the ideal life as inexplicable in terms

of and underivable from the immediate environment; it is a something, in the attainment of which man must adopt methods and processes altogether different from those employed in adjustment to environing circumstances. The genesis of human ideals is beyond the reach of science, says Mr. Colvin; you cannot prove an ideal, and in attaining your ideals you are not adjusting yourself to the world as it is, but somehow or other you progress by alienating yourself from your environment. You construct your ideal, project it into the world, and this then becomes your environment, or, at least, the *terminus ad quem* of your endeavor. This sounds mystical enough, and we have heard it often enough before, phrased now in one way and now in another; but, of course, it is not to be condemned on this account.

Mr. Colvin's position, as I see it, may be reduced to this: Adjustment in biology means that living things must adapt themselves to an unmodifiable natural order, but in human life this natural order may be transcended, new values may be created, and man's world may be of his own making. The *summum bonum* in human life, then, is not adjustment, but idealization and appreciation. In education we should often set the child in opposition to his present environment, in order that he may be the better fitted to enjoy the ideal environment of the future.

Now, everyone will grant that man is incessantly striving to improve his condition, and this leads him to construct ideals which become the goal of his striving. But what I object to in Mr. Colvin's treatment is his relegation of these ideals to the region of the mysterious and the unaccountable, and his thereby removing them from the realm of things to be adjusted to. As a psychologist, he should know that human consciousness is just a marvelous mechanism, designed for the purpose of guiding the organism so as to augment its pleasures and diminish its pains; in current psychological thought, all one's equipment, alike of emotions and of intellectual processes, find their motive and *raison d'être* in the preservation and advancement of the organism in a world of varying values. To discover what these values are, and how to increase the advantageous and avoid the disadvantageous ones, is the sole purpose of conscious

function. All idealization relates to this purpose, and when the purpose is wanting, conscious activity ceases, or fails to develop. There are no goings-on in consciousness which have a supra-environmental reference, in the sense that they do not concern the organism in its needs arising out of its relations with the people and the things in the world. One cannot construct ideals which do not grow right out of present circumstances of adjustment. And these ideals always mirror other sorts of adjustment, which, in the light of past and present experience, are conceived to be more advantageous than existing conditions; this is the only occasion for and explanation of the idealizing activity. Man constructs ideals simply because he is not at present completely adjusted, and he is impelled to better his estate. And having been endowed with extraordinary capacity for the retention and organization of experience, he can discern the reason for his maladjustments in the past and present, and he can lay out a course for the future which promises better results in terms of pleasure and pain. But it seems commonplace to say that in all this activity he is seeking to adapt himself. He is trying incessantly to so determine his actions, and to so control the forces operating on him, that his needs will be best promoted thereby.

It results only in mystification to speak of ideals as tho they sprang from some inscrutable source within and had no relation to the world of concrete realities without; and we will run amuck in education, as history clearly proves, if we set up some undefinable idealistic end to strive toward. Of course, we will always be moving toward some ideal; but *that ideal must be determined to the utmost possible extent, in view of present and past experience, in adjustment to the world.* As a matter of fact, is this not what most persons indorse in practice, even if they do not like the sound of it in theory? What guides a people in making a course of study for their schools? Should we have manual training? Music? Art? How will it *help the individual?* Will it enable him *to get on better with his fellows than he could without it?* Will it enable him *to conquer nature more easily and effectively?* Will it *resolve his intellectual difficulties* arising from his efforts to discern order and harmony and uniformity in a bewilderingly complex envi-

ronment? Why does man conceive the ideal of a higher civic life than can be found in his environment at the moment? Simply because, under the existing order, his social needs are not adequately provided for; or he realizes that his children or the race would be happier, all would prosper better, if they lived differently from what they now do. The same may be said in principle of all one's religious, ethical, and æsthetic ideals. They are not the offspring of some mystic god within us, whose ways and purposes are dark and impenetrable. It is, of course, a simple principle, that in the course of mental development the particular experiences, out of which our ideals and aspirations and beliefs have grown, may, and generally do, drop out of view, so that introspection cannot reveal them; which leads many to think that the experiences were never there, but that the ideals have had some sort of supra-experiential origin. When such persons turn educational theorists they give us a mystical philosophy, in which the individual is viewed in a non-relational light, and they announce educational aims and values which could be of worth only if man was dissociated from everything else in the universe.

Those educational writers who are adopting the term Adjustment make it a fundamental article of their creed that the child must be trained so that he will be constantly striving to re-create the existing environment in the effort to adapt it more completely to his needs. But, in accomplishing this, he must know precisely what the present order is, and in all of his thinking and doing he must work in accord with natural and social law. His ideals must all be founded upon this law; he must not let his fancy conceive and bring forth will-o'-the-wisps, which he then proceeds to chase. The future Elysium which he constructs must be built right out of his experience, and he must be led to see that he can attain it only by correlating the forces in his environment; and this means that his every effective thought and deed must be an adjusting process.

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VI

REVIEWS

Autobiography of Andrew Dickson White—With portraits. New York: The Century Company, 1905. 2 vols. xxi+601; xix+606 p. $7.50 net.

To the student of the problems of higher education in America, Dr. White's *Autobiography,* full as it is of matters of general interest, should prove especially interesting and important. Returning from Europe in the summer of 1856, Mr. White became a professor of history at the University of Michigan. For nearly thirty years he was a teacher of history; for twenty years he was a university president; for more than half a century he has been constantly and deeply interested in the progress of American education. What he has to say to us, therefore, whether by way of reminiscence or admonition, must carry with it great weight.

There are, first, his recollections of old-time pedagogs and professors: among them Joseph A. Allen, "the best teacher of English branches I have ever known," who "seemed to divine the character and enter into the purpose of every boy" (does not that go far toward success?); Oren Root, a pioneer of American science; James W. Hoyt, whose "manly, moral influence over his scholars was remarkable"; and the Yale professors Hadley, Olmsted, Woolsey, Porter, and Thatcher. The description of the training received by the class of 1853 brings out vividly the advance which the last half-century has beheld in our educational efficiency. There is to-day hardly a real college in America where a student cannot get a better training than Yale could give in those days. Greek and Latin literature furnished simply texts and pretexts for gerund-grinding; and there were parrot-like performances in natural philosophy and history. Yet Yale was at the front in America in those days, as she is to-day. In spite of this defective training, however, the class of '53 turned out a remarkably large number of great men; it may be doubted if the class of 1903 will produce any larger percentage. And this forcibly illus-

trates President Hadley's recent remark (*The century,* April), that the college course is mainly valuable for its associations.

After Yale, Europe. At Oxford Mr. White "saw the excellencies of their tutorial system, but also had his eyes opened to some of their deficiencies." The lectures at the Sorbonne and the Collège de France, by such men as Arnold, St. Marc Girardin, and Laboulaye, "strengthened his conception of what a university should be." At Berlin, in 1855-56, he heard the lectures of Lepsius, Boeckh, Von Raumer, Hirsch, Ritter, Curtius, and Ranke, whom he could not follow. During this time, while studying Egyptology, history, and geography, he was also making those extended observations of European methods which were later to result in so much benefit to education in America. "In these great foreign universities, one means of making a reform [at home] became evident, and this was, first of all, the substitution of lectures for recitations, and the creation of an interest in history by treating it as a living subject having relations to present questions."

The opportunity to introduce this reform came with the call to Ann Arbor. In preparing his students for his lectures, Mr. White did away with instruction by rote and used such books as gave the things really worth knowing and communicated some enthusiasm to the reader. In his lectures he made much use of original material. "I found," he says, "that passages actually read from important originals during my lectures gave a reality and vividness to my instruction which were otherwise unattainable. A citation of the *ipsissima verba* of Erasmus, or Luther, or Melanchthon, or Peter Canisius, or Louis XIV, or Robespierre, or Marat, interested my students far more than any quotation at second hand could do. . . In this way alone can history be made real to students."

The story of the founding and development of Cornell University, in which Dr. White had so large and honorable a share, has never been more fully or interestingly told. The "germ idea" was conceived by Mr. White when he was a student at Hobart in 1849-1850. It is really remarkable that a boy of seventeen should have foretold the distinctive traits of the great modern universities, among which, in some respects, Cornell was a pioneer. "First, I made provision for other

studies beside classics and mathematics. There should be professors in the great modern literatures—above all, in our own; there should also be a professor of modern history, and a lecturer on architecture. And next, my university should be under control of no single religious organization; it should be free from all sectarian or party trammels; in electing its trustees and professors no questions should be asked as to their belief or their attachment to this or that sect or party."

The struggles of Mr. Cornell and Mr. White to carry out their design in founding Cornell University fill some instructive chapters. Time has shown the far-seeing wisdom embodied in Senator White's speech in 1865. The chief points he made were: "First, that while, as regards primary education, the policy of the State should be diffusion of resources, it should be, as regards university education, concentration of resources. Secondly, that sectarian colleges could not do the work required. Thirdly, that any institution for higher education in the State must form an integral part of the whole system of public instruction; that the university should not be isolated from the school system, as were the existing colleges, but that it should have a living connection with the system, should push its roots down into it and thru it, drawing life from it and sending life back into it." These principles are as true to-day as they were forty years ago.

In conclusion, attention may be directed to Dr. White's discussions of and opinions on the discipline of students (i. 348 ff.), non-resident professors and lecturers (i. 358), elective courses (i. 360 ff.), degrees (i. 389 ff.), scholarships and tuition fees (i. 391 ff.); "coeducation" and unsectarian religious instruction (chap. xxiii); and the relations between university presidents, faculties, and trustees. We do not hesitate to assert that if these views were more widely accepted and acted on, the efficiency of our higher educational system would be vastly increased.

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CORNELL UNIVERSITY

Field and laboratory exercises in physical geography—By JAMES F. CHAMBERLAIN. New York: American Book Co., 1903. 127 p. 50 c.

If physical geography is to receive the recognition which has been accorded its sister sciences and which its advocates

confidently expect for it, it must adopt the same articles of faith to which these other sciences have long subscribed.

A knowledge of facts gained from text-books can no longer be considered as synonymous with a knowledge of physical geography. To gain this knowledge we must "proceed by observation and experiment, by guarded hypothesis and careful verification," and that an opportunity for this method may be afforded, the laboratory must be substituted for the text-book as the basis of the work.

The recognition of this fact brings with it a demand for some reliable guide in this new method of procedure, for the teacher of physical geography is too often a teacher of many subjects, who has neither time nor perhaps adequate training to organize this field unaided.

In answer to this demand several laboratory manuals have appeared within the last two years, among which, Chamberlain's *Field and laboratory exercises in physical geography*, the volume under review, is one of the latest and best. The exercises, sixty-nine in number, are on the whole carefully selected, and are generally proportioned among the various departments of the subject, *i. e.*, "The Earth as a Globe," "The Atmosphere," "The Ocean," "The Lands," and "Life," in accordance with the importance of each department. In the treatment of the land, however, a more liberal use of topographic maps seems essential. The directions are clear and of a nature to stimulate thought and to awaken the spirit of investigation. It would seem in some cases that the author, in his endeavor to avoid giving information to the pupils, expects the impossible from their observation. It is difficult to see how a pupil could determine, from map or picture study, "Which lakes appear to have been formed by movements of the crust of the earth? Which by river action?"

The order of the exercises should be changed in some instances. For example, the study of isobaric lines should certainly not follow that of areas of high and low pressure. There is also some repetition of problems which requires correction both from the standpoint of time and to preserve the logical development of the subject.

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VII

NOTES AND NEWS

Attacking the "Fads"

It is not so many years since public interest and enthusiasm were first enlisted on behalf of the movement to enrich and strengthen the elementary-school program of studies. At that time the narrowness and impracticableness of the old disciplinary drill in the so-called three R's were everywhere felt and admitted. In the search for something to give life and new power to the elementary-school instruction, an attempt was made—in many ways a very successful attempt—to add training of the motor powers, training in observation and inductive reasoning, and training in practical adaptation of means to ends by calling upon some of the familiar industries to render to the school material that could be used in elementary education. Now, after little more than a decade has elapsed, there is a reactionary movement under fair headway which appears to have the sympathy of a large portion of the public press and of no inconsiderable portion of the public itself. Nevertheless, this reactionary movement is wholly indefensible and is a passing phase which will shortly trouble us no more. It is too often the result, as for example in New York and Chicago, of personal and political antagonisms to a devoted educational leader who has insisted upon improving the schools in spite of themselves. At best it rests upon lack of knowledge of what the schools formerly accomplished and of what they are now accomplishing.

As a matter of fact, the arguments that were relied upon ten or more years ago to improve and enrich the elementary-school curriculum, were irrefutable then and are irrefutable now. Moreover, as a very superficial inquiry would discover, the schools are doing better work in the three R's to-day than they ever did before, and they are doing much better work in the so-called fundamental subjects for the very reason that they are not confining themselves to those subjects alone. It

seems difficult to make many persons understand that the amount of time devoted to a subject of instruction is but a sorry index of the capacity of a student in that subject. There is a saturation point of the mind as well as of the atmosphere, and when that is reached there must be a change of activity and interest or else educational efficiency is at an end.

After certain interested individuals and newspapers are tired of making as much trouble as possible for Superintendent Maxwell and Superintendent Cooley, they may well give attention to the following statement published in New York City by the Principals' Club:

We believe that our schools should graduate pupils who can spell, cipher, read, and write. We are told that our graduates cannot do these things. That is the cry in every decade and under every system, and the increasing complexity of our social life makes the problem of adjustment more difficult each year. The system of three R's was found insufficient twenty years ago; it would be hopelessly so to-day.

But we do not admit that even in these essentials pupils are any less fit now. We no longer drill them on words like "hydrocephalus." We do not consider the minutiæ of technical business arithmetic, like alligation or equation of payments, but in the matter of the four elementary operations, as applied to integers, fractions, and decimals, in the spelling of words that intelligent people use in ordinary life, in the matter of legible writing, we who have had opportunities of judging many more hundreds of pupils than any single employer, and under both conditions, are willing to affirm that there has been no retrogression.

But in other essentials there is no comparison to be made, for it is less an improvement than a revolutionary advancement. Language is no longer a series of abstractions, of analysis and spelling. Compositions are written now, not as before by gifted individuals, but by whole classes, which in tone and expression are, we think, not inferior to the language of some of your critical correspondents. We do not refer to those former aggregations of red-ink corrections which when finally rewritten were less the labor of the pupil than the teacher. What we have are the free expressions of the pupils' own thoughts, enriched by new associations, and inspired by a hundred new interests.

Manual training, so much misunderstood even by some who teach, is not an added subject to take more time; it supplements the older formal teaching. What a new meaning there is in number when it is the expression of ratios of concrete things that the child measures, marks, and makes—and compare it with the dreary repetition of numbered abstractions. The child's handiwork is not an amusement; it is the most real kind of instruction; in such work the indefinite thoughts of the pupil receive in his creation the final test of concrete reality.

The Principals' Club sums up in admirable fashion the rea-

sons why the three R's alone are pitifully inadequate for a training for life. Here is their statement of the case and it cannot be improved upon:

1. That they are a survival of a period when the industrial development of modern life was unknown, and they do not recognize these modern changes.

2. That when taught exclusively they degenerate into a vicious set of drills, in which provision is made for the smallest and least significant part of the child's activities.

3. That as they lack content they make no provision for any other than a purely intellectual training; aside from the influence of school and teacher, there is nothing in a knowledge of the three R's which has any real emotional or ethical influence. This would be impossible under a modern course of study.

4. That all the abuses of elementary methods have arisen from an exclusive three-R course.

5. That the leading exponents of educational science and method, including the trend of philosophic thought of the great master minds, are agreed on the evils of a system of instruction which concerns itself with words rather than things, with form rather than content.

6. That "fads and frills" give content to the course of study, give opportunity for the natural development of children's minds, supply in outline what is really the best and most truly useful knowledge, allow for ethical and emotional training, and in certain branches care for the health and physical well-being of the child.

A Small Boston School Committee

The Legislature of Massachusetts has passed an act which will bring about a marked change in the administration of the public-school system of Boston. The members of the present School Committee, twenty-four in number, will go out of office in December next, and a new Committee, to consist of but five members, will succeed to all the rights and privileges of the present Committee. The five members of the School Committee are to be elected at one time, two for a term of three years, two for a term of two years, and one for a term of one year. In the future the law will operate automatically, the members serving for a term of three years each.

The new law is very brief, containing not more than 150 words. It puts it within the power of the City of Boston to have the most efficient school board in America. The success or failure of the law will depend entirely upon the char-

acter and personality of those who are chosen by the voters to serve under it. It goes without saying that a board of five members who are weak and susceptible to outside influence and pressure will be very much worse than a board of twenty-four members composed of just the same elements. On the other hand, a board of five members who are strong, independent, and determined, will be very much better for the city than a board of twenty-four members similarly constituted.

Perhaps it was wise not to confuse the issue of a small school committee by introducing into the act any other contentious matter, but one cannot help wishing that specified powers were delegated by law to the superintendent, the board of supervisors, and the other executive agents of the board. All these matters are left to be governed by the by-laws which the new School Committee will adopt.

Some of the best citizens of Boston feel that there is now a great opportunity, which could be best met by having the two chief political parties unite in nominating five business men of high character and public spirit to serve upon the new School Committee. Such action as this would start the new movement on a high plane and would go far to insure its permanent success.

Superintendent Conley has been most successful in his administration of the Boston schools. His task has not been an easy one, altho he has not been resisted and attacked in the extreme and unscrupulous way with which both Superintendent Maxwell of New York and Superintendent Cooley of Chicago are only too familiar.